

DEVELOPMENTS IN AGING: 1990
VOLUME 2—APPENDIXES

A REPORT

OF THE

SPECIAL COMMITTEE ON AGING
UNITED STATES SENATE

PURSUANT TO

S. RES. 66, SEC. 19(c), FEBRUARY 28, 1990

Resolution Authorizing a Study of the Problems of the
Aged and Aging



MARCH 22 (legislative day, FEBRUARY 6), 1991.—Ordered to be printed

U.S. GOVERNMENT PRINTING OFFICE

WASHINGTON : 1991

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LETTER OF TRANSMITTAL

U.S. SENATE,
SPECIAL COMMITTEE ON AGING,
Washington, DC, February 28, 1991.

Hon. J. DANFORTH QUAYLE,
President, U.S. Senate,
Washington, DC.

DEAR MR. PRESIDENT: Under authority of Senate Resolution 66, agreed to February 28, 1990, I am submitting to you the annual report of the U.S. Senate Special Committee on Aging, *Developments in Aging: 1990*, volume 2.

Senate Resolution 4, the Committee Systems Reorganization Amendments of 1977, authorizes the Special Committee on Aging "to conduct a continuing study of any and all matters pertaining to problems and opportunities of older people, including but not limited to, problems and opportunities of maintaining health, of assuring adequate income, of finding employment, of engaging in productive and rewarding activity, of securing proper housing and, when necessary, of obtaining care and assistance." Senate Resolution 4 also requires that the results of these studies and recommendations be reported to the Senate annually.

This report describes actions taken during 1990 by the Congress, the administration, and the U.S. Senate Special Committee on Aging, which are significant to our Nation's older citizens. It also summarizes and analyzes the Federal policies and programs that are of the most continuing importance for older persons and their families.

On behalf of the members of the committee and its staff, I am pleased to transmit this report to you.

Sincerely,

DAVID PRYOR, *Chairman.*

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DEVELOPMENTS IN AGING: 1990

VOLUME 2—APPENDIXES

MARCH 22 (legislative day, FEBRUARY 6), 1991.—Ordered to be printed

Mr. PRYOR, from the Special Committee on Aging,
submitted the following

REPORT
APPENDIXES

APPENDIX 1

ANNUAL REPORT OF THE FEDERAL COUNCIL ON THE
AGING

DECEMBER 15, 1990.

DEAR MR. CHAIRMAN: On behalf of the Federal Council on the Aging, I am pleased to submit a preliminary summary of the 1990 annual report.

This document examines the history and present membership of the Council. It also highlights the various positions taken by the Council on a number of legislative and other issues concerning the well-being of the elderly. We are hopeful that the Council's view will be considered as the One Hundred and Second Congress convenes.

We appreciate the continuing interest of the Special Committee on Aging and look forward to another year of cooperative efforts with committee members and staff toward our mutual goal of service to older Americans.

Sincerely,

INGRID C. AZVEDO, *Chairman.*

SUMMARY OF THE 1990 ANNUAL REPORT

I. INTRODUCTION

A. *Background*

The Federal Council on the Aging (FCoA) is the functional successor to the earlier and smaller Advisory Council on Older Americans, which was created by the 1965 Older Americans Act. In 1973, when the FCoA was created, Congress was concerned about Federal responsibility for the interests of older Americans, and the breadth of vision that such responsibility would reflect. Having decided to upgrade the existing

advisory committee, Congress patterned the legislative language authorizing the FCoA after the charter of the U.S. Commission on Civil Rights.

The FCoA is authorized by Section 204 of the Older Americans Act as amended. The Council is composed of 15 members—appointed five members each by the President, the House of Representatives, and the Senate. Council members, who are appointed for 3-year terms, represent a cross-section of rural and urban older Americans, national organizations with an interest in aging, business and labor, and the general public. According to statute, at least nine members must themselves be older individuals.

The President selects the Chairperson of the Council from the appointed members. The FCoA is mandated to meet at least quarterly, and at the call of the Chairperson.

Functions of the Council include:

- Continually reviewing and evaluating Federal policies and programs affecting the aging for the purpose of appraising their value and their impact on the lives of older Americans;
- Serving as spokesperson on behalf of older Americans by making recommendations about Federal policies regarding the aging and federally conducted or assisted programs and other activities relating to or affecting them;
- Informing the public about the problems and needs of the aging by collecting and disseminating information, conducting or commissioning studies and publishing their results, and by issuing reports; and
- Providing public forums for discussing and publicizing the problems and needs of the aging and obtaining information relating to those needs by holding public hearings and by conducting or sponsoring conferences, workshops, and other such meetings.

The Council is required by law to prepare an annual report for the President by March 31 of the ensuing year. Copies are distributed to Members of Congress, governmental and private agencies, institutions of higher education, and individual citizens interested in FCoA activities.

Funds appropriated for the Council are included in the overall appropriation of the Department of Health and Human Services (DHHS). These funds are used to underwrite meetings of the Council, to support staff, and publish information tracts authorized by the Council.

The results of its public meetings and activities concerning issues and policies affecting older Americans are shared with the President, Congress, the Secretary of DHHS, the Assistant Secretary for Human Development Services (HDS), the Commissioner of the Administration on Aging (AoA), National and State Aging organizations, and others interested in the well-being of older Americans.

B. Members of the Federal Council on the Aging

Ingrid C. Azvedo, Elk Grove, CA—Chairman, appointed to a 3-year term ending in January 1992. Mrs. Azvedo was appointed to her second term as Council Chairman by President Reagan in 1989.

Mrs. Azvedo has been advocating for senior programs through the California legislature and Governor's office for many years. She maintains an active schedule of speaking engagements throughout the State of California, discussing senior issues and programs both in the private and public sectors. Currently she serves on the Governor's Task Force on Long-Term Care and as a Commissioner on the California Commission on Aging.

Oscar P. "Bob" Bobbitt, Austin, TX—Vice Chairman, upon the recommendations of House Majority Leader Jim Wright, Mr. Bobbitt was appointed by House Speaker "Tip" O'Neill to a second 3-year term ending May 1991.

In February 1984, he became executive director of the Texas Department on Aging, and served in that capacity until March 1990.

June Allyson, Los Angeles, CA, appointed to a 3-year term ending in January 1992 by former President Reagan. Ms. Allyson has been an actress working through the Jerico Group in Los Angeles since 1944.

Virgil S. Boucher, Peoria, IL, appointed by the Speaker of the House to a 3-year term ending in July 1993. Mr. Boucher is an active advocate for programs dealing with crimes against the elderly.

Newton B. Dodson, Clarksdale, MS, appointed by the Senate to a 3-year term which ended in August 1990. Mr. Dodson is currently chief executive officer of a community mental health center.

Frances "Peg" Lamont, Aberdeen, SD, appointed by President Reagan to a 3-year term ending in December 1986. Mrs. Lamont was reappointed by the Senate

Majority Leader, served her second 3-year term on the Council, which expired in February 1990.

Mrs. Lamont served 14 years in the South Dakota State legislature, and is chairman of the Governor's Advisory Council on Aging.

Tessa Macaulay, Deerfield Beach, FL, appointed by the House to a second 3-year term ending in August 1992, Ms. Macaulay is Coordinator of Gerontological Programs at Florida Power & Light Company.

Mary J. Majors, Cedar Falls, IA, appointed by the Senate to a second 3-year term ending in February 1992, Mrs. Majors is retired, and is active in all types of volunteer work.

Josephine K. Oblinger, Springfield, IL, appointed by the House to a second 3-year term ending in March 1992, Mrs. Oblinger has had an extensive career as a State Legislator. Currently, she is Director of Senior Involvement in the Office of Governor James R. Thompson.

Kathleen L. Osborne, Los Angeles, CA, appointed by President Reagan to a 3-year term ending in January 1992, Ms. Osborne is currently executive assistant to and office manager for former President Reagan.

Raymond Raschko, Spokane, WA, Mr. Raschko was appointed on August 11, 1989, by the House Speaker to serve the remainder of a 3-year term ending in July 1990, and was appointed to serve a full 3-year term ending in July 1993.

Mr. Raschko serves as Director of Elderly Services with the Spokane Community Mental Health agency, and as a member of the Washington State Long-Term Care Commission.

Patricia A. Riley, Brunswick, ME, appointed by the Senate Majority Leader to a 3-year term ending in May 1992, Ms. Riley is currently President of the nonprofit Center for Health Policy Development and executive director of its affiliate, the National Academy for State Health Policy. She previously served as Director of the Bureau of Maine's elderly and its Bureau of Medical Services. She is also a member of the American Bar Association's Commission on Legal Problems of the Elderly.

Gloria Sherwood, Beverly Hills, CA, appointed to a 3-year term ending in December 1990 by former President Reagan, Ms. Sherwood is currently a mental health practitioner in private practice in Los Angeles, CA, and a broker affiliate and manager of the Residential Leasing Division of the Prudential California Realty Company.

Norman E. Wymbs, Boca Raton, FL, appointed to a 3-year term ending in January 1992 by former President Reagan, Mr. Wymbs is a former Mayor of the City of Boca Raton. He has been a sole proprietor in private investments since 1968.

E. Don Yoak, Spencer, WV, a native of West Virginia, Mr. Yoak was appointed in July 1989 by Senate Majority Leader Robert C. Byrd to a 3-year term ending in July 1992. He is retired from the West Virginia Department of Highways and has been active in West Virginia Legislatures for the last 50 years. Mr. Yoak currently serves as the Speaker of the West Virginia Silver Haired Legislature.

During 1990 two members were newly appointed to the Council:

Virginia Zachert, Augusta, GA, appointed to a 3-year term ending in March 1993 by the Senate Majority Leader, Dr. Zachert holds a Ph.D. in industrial psychology. She is currently with the Georgia Silver Haired Legislature serving as an advocate for the elderly. She holds the titles of Senator, President of the Senate, and Chairman of the Board of Directors. Dr. Zachert has published numerous articles in the medical and aging fields. She is also a former Federal employee having worked as a research psychologist.

Robert L. Goldman, Oklahoma City, OK, appointed by the Senate to a 3-year term ending in October 1993. Since retirement from the Bell System in 1979, he has been an active advocate for improving the quality of life for older Americans. He is a member of the boards of numerous senior advocacy organizations and maintains an intergenerational interest by working with handicapped school children. Currently, Mr. Goldman serves as Chairman of the Oklahoma State Council on Aging, and Vice President of the Oklahoma State Board of Nursing Homes.

C. Calendar 1990 Meeting Dates

The Council met four times during the year 1990, as required by the Older Americans Act. The meeting dates were February 14-16, May 16-17, September 26-27, and November 14-15. The meetings were held in Washington, D.C.

All FCoA meetings were announced in the *Federal Register* and notices of the meetings sent to representatives of national organizations, staff of various Federal

agencies, and to Congressional members and committees interested in or responsible for aging. Minutes are distributed to individuals who attended the meetings and to any interested parties who request them. Publications and documents pertaining to official actions are maintained in the Office of the Federal Council on the Aging and are available to the general public. The FCoA mailing address is: Room 4280, Wilbur J. Cohen Federal Building, 330 Independence Avenue, S.W., Washington, D.C. 20201-0001.

D. Council Meetings Scheduled for Calendar 1991

The Council will meet January 30-31, 1991, to set meeting dates and plan agenda for the 1991 calendar year.

II. ACTION OF THE FEDERAL COUNCIL ON THE AGING DURING CALENDAR YEAR 1990

A. Guardianship and Guardianship Services

During its February meeting, the Council examined the progress being made in the area of guardianship and the elderly as a result of Council's recommendations issued at their May 1988 meeting:

Resolution 1: "The Federal Council on the Aging endorses and urges rapid implementation of guardianship programs and laws for the benefit and protection of older Americans as exemplified by the *Statement of Recommended Judicial Practices* adopted by the National Conference of the Judiciary on Guardianship Proceedings for the Elderly." (Available from the American Bar Association, 1800 M Street, N.W., Washington, D.C. 20036.)

Resolution 2: "To send copies of the *Standards and Guidelines* for guardianship developed by the Center for Social Gerontology, Inc., and the Michigan Office of Services to the Aging, to 50 State departments of human services and aging."

In a presentation to the Council, Ms. Erica F. Wood of the American Bar Association, Commission on Legal Problems of the Elderly, reported that in 1988, 28 States introduced approximately 100 guardianship bills. Twenty-three bills in 18 States passed. In addition, seven States (Florida, Ohio, Michigan, New Mexico, North Dakota, Indiana, and Oklahoma) completely revised their guardianship codes in 1988-89, to strengthen due process, amend definitions and methods for determining incapacity, encourage less restrictive alternatives including limited guardianship, and enhance guardian accountability and reporting requirements.

Ms. Wood also indicated that as a result of rising public interest regarding these issues, significant progress is being made concerning the setting of standards for guardians, training and education of guardians, judges, and attorneys, monitoring of guardianships, and the development of alternatives to guardianship.

The Council also received a briefing by staff of the Office of Program Development of the Administration on Aging on currently active grants funded under Title IV of the Older Americans Act which focused on issues of guardianship.

B. Options for Long-Term Health Care for the Elderly

During their May quarterly meeting, the Council reviewed the various options and proposals being offered or developed to address the Nation's growing crisis in long-term health care, particularly as they would affect older Americans. Guest speakers at the meeting included Mrs. Constance Horner, Deputy Secretary of HHS and Chairperson of the Secretary's Task Force on Long-Term Health Care and the Uninsured, who provided opening remarks. Other participants included the following:

Dr. Joyce Berry, Commissioner on Aging discussed her views on the most important issues in the field of aging, AoA's goals and objectives for the future, the growing challenge of providing long-term care to our Nation's elderly, and related issues.

Sandy Crank, Associate Commissioner for Retirement and Survivors Insurance, Social Security Administration provided stimulating remarks about the problems of the aged, and informed the Council on what Social Security Commissioner Gwen King is doing to make sure that Social Security programs and services effectively serve the aged by "helping to make the golden years truly golden."

Tom Hoyer, Director, Division of Provider Services Coverage Policy, Bureau of Policy Development, Health Care Financing Administration focused his re-

marks on nursing home reform. He discussed Medicare and Medicaid programs in terms of their impact on nursing home care since 1965.

Dr. Robert Friedland, Staff Member for the U.S. Bipartisan Commission on Comprehensive Health Care (Pepper Commission). Dr. Friedland's remarks focused primarily on the long-term care side of the Report.

These presentations were printed in their entirety and disseminated to the Congress, the Administration, the Aging Network, and other interested parties.

Also during their May Meeting, Council members visited the Luther Place Senior Center for the Homeless Aged in Washington, D.C.

C. Reauthorization of the Older Americans Act; The Process and Current Legislative Issues

During their September quarterly meeting, the Council reviewed and discussed the Older Americans Act and issues related to the approaching reauthorization of the legislation. They also participated in a detailed briefing provided by Congressional Quarterly, Inc., on the Federal legislative process.

At their November quarterly meeting the Council continued their focus on the Older Americans Act. Presentations provided by Dr. Paul Kerschner, Deputy Director of the National Council on Aging (NCoA), Dr. Daniel Quirk, Executive Director of the National Association of State Units On Aging (NASUA), and Ms. Jo Reed, Senior Coordinator for Federal Affairs of the American Association of Retired Persons (AARP), reviewed the history and evolution of the Older Americans Act as well as related issues of current concern.

These presentations were followed by a panel discussion of topics of debate regarding the approaching reauthorization of the Older Americans Act. The discussion was moderated by Ms. Carol O'Shaughnessy of the Congressional Research Service, Library of Congress, and panel members were staff persons of the Congressional Committees primarily concerned with Aging issues:

Mr. Bill Benson, Staff Director, Subcommittee on Aging, Senate Labor and Human Resources Committee;

Mr. Tom Kelley, Human Resources Subcommittee, House Education and Labor Committee;

Ms. Moya Benoit, Subcommittee on Human Services, House Select Committee on Aging; and

Ms. Diane Braunstein, Senate Special Committee on Aging.

Following the panel presentation, Council members discussed a wide range of issues and reached preliminary consensus on a number of policy positions, which appear at the conclusion of this report. The Council will complete their consideration of these and other issues at a special meeting of the Council planned for January 30-31, 1990. At that time they will finalize their deliberations and issue their formal recommendations for reauthorization of the Older Americans Act.

D. National Nutrition Program

During the November quarterly meeting the Council received a briefing on nutrition programs for the elderly by representatives of the American Dietetic Association (ADA). The panel was composed of the following individuals: Linda Netterville, Nutritionist, Texas Department on Aging; Julie Stauss, Manager, Division of Governmental Affairs, American Dietetic Association; Kathryn O. Bishirjian, Bureau Chief, Allegheny County Department on Aging, Pittsburgh, PA; and Colleen Pierre, Director, Eating Together, Baltimore Commission on Aging, Baltimore, MD.

During their presentation, this panel also provided ADA's recommendations for the reauthorization of the Older Americans Act for the Council's consideration.

E. Mental Health and the Elderly

During the November quarterly meeting, the Council's Committee on Targeting and Access to Services conducted a Forum on Mental Health and the Elderly. The purpose of the forum was (1) to focus attention on the many mental health problems to which older persons are particularly susceptible, and (2) to encourage and promote greater cooperation between the Aging and Mental Health networks in addressing the unique mental health needs of the elderly.

Presentations included the following:

Overview of Current Issues—Mental Health and the Elderly/Future Directions for Programs/Pending Legislative Issues; Manual Miranda, Ph.D.—Assistant Director for Interdisciplinary Research, National Institute on Aging.

Current National Institute of Mental Health Programs Serving the Elderly/Linkages Between the Aging Services Network and Mental Health Providers; Dr. Barry Lebowitz—Chief, Mental Disorders/Aging, National Institute of Mental Health.

Mental Health Issues and Care of Older Persons in Long-Term Care Facilities/Physical and Chemical Restraints of Long Term-Care Residents; Elma Holder—Executive Director, National Citizen's Coalition for Nursing Home Reform.

Mental Health Program Initiatives and Perspectives/Creative Program Models; Larry Rickards, Assistant Director, National Association of Area Agencies on Aging.

Creating Greater Public Awareness about Prevention, Detection and Care on Mental Health Problems in the Elderly/Suicide Prevention, Depression, Alcoholism; J. James Cotter, Director, Division of Program Development and Management, Virginia Department for the Aging.

Today's Community Mental Health Industry/Program Development and Treatment Strategies for Older Persons Using Limited Resources; Mark Knight, Director of Training and Technical Assistance, National Council of Community Mental Health Services.

Public Education and Self Help Programs/Mental Health and Aging Coalition Building; Ruth J. L. Richard—Manager, Social Outreach and Support Section, Program Coordination and Development, American Association of Retired Persons.

Office of Technology Assessment Study, "Confused Minds, Burdened Families—Finding Help for People with Alzheimer's and Other Dementias"; Katie Maslow, Project Director.

Because of the information shared with the Council during this forum provided an important framework for discussions about issues associated with the delivery of supportive and mental health services, and problems encountered in the delivery of effective mental health services to the elderly, the Council concluded that the presentations should be published as a report that will serve to increase public awareness and to draw together experiences and ideas in a way that will be useful in successfully carrying out the mission to which this Council is mandated.

III. FUTURE DEVELOPMENTS

The Council will meet on January 30 and 31, 1991, to plan their agenda for the year, establish committees to conduct activities, and set dates for their quarterly meetings. Activities currently planned for 1991 include the following:

A. Aging America: Trends and Projections

The FCoA will participate for the third time in the development, printing and distribution of the demographic report—*Aging America: Trends and Projections, 1989-90*. The publication is a cooperative effort with the Administration on Aging, the Senate Special Committee on Aging and The American Association of Retired Persons (AARP).

B. Preparations for a 1991 White House Conference on Aging

In accordance with provisions of the Older Americans Act which states: "The Secretary shall establish an advisory committee to the Conference which shall include representation from the Federal Council on the Aging and other public agencies and private nonprofit organizations as appropriate" the Council will participate fully in the planning and preparation for a 1991 White House Conference on Aging should such conference be called by the President.

C. Reauthorization of the Older Americans Act

The Federal Council on the Aging will be finalizing their recommendations for the Reauthorization of the Older Americans Act of 1965. Once the Council completes final action on their recommendations, they will be forwarded to the President and the Congress for consideration.

D. Mental Health and the Elderly

The Council will continue work on the publication of a report on Mental Health Issues affecting the Elderly. Presentations provided at the November, 1990 Quarterly Meeting of the Council will form the basis for the report, which seeks to identify

and encourage ways to improve coordination between the Aging and Mental Health Networks in improving access for the elderly to services provided by both networks.

E. The Council will continue to closely monitor progress in addressing the growing long-term health care needs of the Nation's ever-increasing older population, including the implementation of aspects of the recommendations issued by the U.S. Bipartisan Commission on Comprehensive Health Care (Pepper Commission) which were reviewed at the May 1990 quarterly meeting.

IV. COUNCIL RECOMMENDATIONS

During their November quarterly meeting, the council reached preliminary consensus on the following issues. These preliminary statements are subjects to further scrutiny by the Council, and may be altered or eliminated from the Council's final recommendations for reauthorization of the Older Americans Act.

1. States shall develop intrastate funding formulas with special consideration for older populations with the following characteristics: Low income, minority, 75 years and older, non-English speaking, and those living alone.

2. Section 311(a)(4) should be amended to require *annual* adjustment of USDA reimbursement increases which reflect changes in the Consumer Price Index.

3. The Aging Network should be encouraged to concentrate on the development of programs which strengthen cooperative arrangements with private industry, community leaders and organizations, and other institutions.

4. All mandates for new programs should be accompanied by separate authorization and adequate appropriations to prevent any detrimental impact on currently funded services and programs.

5. Provisions of the Act which mandate or encourage interaction between the Administration on Aging and other Departments or agencies should be complemented and supported by companion language in the authorizing legislation of those agencies. This legislation should also compel those agencies' cooperation in efforts and activities of the Commissioner on Aging in pursuing the mandates concerning inter-departmental coordination which are stated in Title II, Section 203, of the Act.

6. *Section 204(a)(2) Current Law.*—"Any member appointed to fill a vacancy occurring prior to the expiration of the term for which such member's predecessor was appointed shall be appointed only for the remainder of such term. Members shall be eligible for reappointment and may serve after the expiration of their terms until their successors have taken office."

Proposals.—Add, "In such instances, the succeeding member's term expiration date shall remain March first of the third class year of the appointment."

7. *Section 204(b)(1)(A) Current Law.*—"The members appointed in 1985 shall be referred to as Class 1 members; the members appointed in 1986 shall be referred to as class 2 members; the members appointed in 1987 shall be referred to as class 3 members."

Proposal.—Change "1985", "1986", and "1985" to "1991", "1992", and "1993", respectively. Also, add "The terms of the members and their successors, if any, shall expire on March first of the third year of their class term."

8. *Ombudsman Program.*—States shall seek to expand ombudsman services to improve the quality of community based and institutional care.

State Agencies shall seek to improve the quality of ombudsman services through establishing and implementing standards for services, continued and improved training of ombudsmen personnel, including trained and qualified volunteers.

9. *Autonomy and Authority of AoA.*—Funding for AoA should be included as a separate line item in the HHS budget and should provide the Commissioner with maximum control regarding the agency's budget, including travel and personnel.

10. *Cost sharing.*—The Council supports the implementation of cost sharing arrangements for services provided under the Older Americans Act. The two services which would be exempted from such new provisions are information and referral and ombudsman services. In implementing such provisions, States should carefully consider the views of older persons and providers and take special care to not exclude vulnerable, low income and minority older persons.

11. *Education.*—Basic gerontological and geriatric courses should be a *required* component of all Medical, Psychological, Nursing, Allied Health, and Social Work training curricula.

AoA should enlist the support and assistance of the academic community, including the Department of Education, Universities and Colleges, Community Colleges, National Educational Organizations and State and local public education systems and other related Federal programs to create an adequate supply of trained and qualified personnel to meet the service needs.

APPENDIX 2

REPORT FROM FEDERAL DEPARTMENTS AND AGENCIES

ITEM 1. DEPARTMENT OF AGRICULTURE

JANUARY 11, 1991.

DEAR MR. CHAIRMAN: I am pleased to provide information for the annual report of the Senate Special Committee on Aging. Enclosed is information on programs and activities within the Department of Agriculture (USDA) which impact older Americans. The enclosures delineate each USDA agency administering relevant programs and activities.

If I can be of further assistance, please feel free to contact me or have your staff contact Ms. Jo Ann C. Jenkins at (202) 447-5212.

Sincerely,

JACK C. PARNELL
(For Clayton Yeutter),
Secretary.

Enclosures.

AGRICULTURAL RESEARCH SERVICE (ARS)

1. Title and purpose statement of each program or activity which affects older Americans.

The Agricultural Research Service (ARS) conducts human nutrition research with emphasis on problems of the elderly as well as other groups. ARS operates a Human Nutrition Research Center on Aging (HNRCA) at Tufts University, Boston, MA. The mission of this center on aging is twofold: (1) The examination of the relationship of nutrition to the aging process throughout adult life, and (2) the determination of dietary needs of people who are already elderly. Center scientists are determining the ways in which diet and nutritional status influence the onset and progression of aging employing experimental animals, tissue cultures, and human subjects for such studies. They are exploring the ways in which diet, alone and in association with other factors, can delay or prevent the onset of degenerative conditions commonly associated with the aging process. This research will determine nutrient requirements during aging and the ways in which an optimal diet, in combination with genetic, physiological, psychological, sociological, and environmental factors, may provide health and vigor over the lifespan of man. Scientists at the HNRCA are addressing three general questions of central importance to this mission: (1) How does nutrition influence the progressive loss of tissue functions with aging? (2) What is the role of nutrition in the genesis of major chronic degenerative conditions associated with the aging process? (3) What are the nutrient requirements necessary to maintain the optimal functional well-being of older people?

2. The amount of funds allocated or expended.

The total funds allocated to the HNRCA at Tufts in fiscal year 1990 was \$13,544,807 (net to location). Ten other human nutrition research projects conducted at other ARS locations, totaling \$5,223,197, also relate to problems of older Americans.

3. Brief description of accomplishments.

ARS HUMAN NUTRITION RESEARCH ACCOMPLISHMENTS—FISCAL YEAR 1990

VITAMIN B6 REQUIREMENTS OF THE ELDERLY MEN AND WOMEN

The vitamin B6 requirement of elderly men and women (greater than 60 years) were studied using a depletion-repletion design. The protocol consisted of having subjects eat a diet deficient in vitamin B6 for 17-20 days, and then feeding them diets containing increasing amounts of B6 over a period of 63 days. Biochemical tests for vitamin B6 status were done on blood and urine specimens collected during the period of vitamin B6-deficiency, which gradually returned to normal during vitamin B6 repletion. The amounts of vitamin B6 that restored the biochemical tests to baseline (i.e., pre-depletion) values were considered the minimum vitamin B6 requirements. These were determined to be 1.96 mg/day for elderly men and 1.90 mg/day for elderly women. These values are greater than the minimum vitamin B6 requirements reported for younger adults.

VITAMIN B12 ABSORPTION IN ATROPHIC GASTRITIS

Poor absorption of food bound vitamin B12 has been reported in atrophic gastritis, a common condition of aging which is characterized by reduced or no gastric acid output, as well as increased numbers of bacteria in the upper parts of the small intestine and the stomach. Food bound vitamin B12 is poorly absorbed in atrophic gastritis subjects as compared to normal controls. It has been found that this poor absorption of vitamin B12 can be reversed by the administration of an antibiotic. These findings suggest that the increased numbers of bacteria in the upper parts of the stomach and small intestine cause the poor absorption of food bound vitamin B12 by binding the vitamin and using it for their own purposes. The poor digestion of food protein from vitamin B12 due to lack of acid seems to play only a minor role in causing the vitamin B12 malabsorption in this condition. Reducing the number of bacteria in the stomach and the upper intestine normalizes the poor absorption of food bound B12.

EFFECT OF GASTRIC ACIDITY AND HIGH FIBER INTAKE ON CALCIUM ABSORPTION IN ELDERLY

Osteoporosis is a debilitating problem in the elderly that is associated with decreased absorption of calcium by the intestine. Some studies have suggested that inadequate amounts of gastric acid and diets high in fiber decrease calcium absorption. This is important because decreased production of gastric acid (achlorhydria) affects more than 24 percent of persons over age 60. Accordingly, the ability of the intestine to absorb calcium from test meals was measured in nine healthy elderly subjects and eight elderly subjects with achlorhydria. Healthy controls given a low-fiber meal (0.5 gm) retained 26 percent of the calcium. A test meal high in fiber (10.5 gms) reduced the amount of calcium absorbed to 20 percent. However, there was no difference in absorption of calcium between normal subjects or subjects with achlorhydria. Further, the addition of hydrochloric acid to the test meal to stimulate gastric acid did not change the absorption of calcium. This study shows that calcium is well absorbed from food and that its absorption does not depend on gastric acid. High fiber intake decreases the absorption of calcium. These data are important in determining calcium requirements in the elderly.

CATARACT PREVENTION—DEGRADATION OF PROTEINS IN CULTURED BOVINE LENS

In order for the lens to maintain clarity and transmit light to the retina, proteins that are no longer necessary for the lens cell or that are damaged must be degraded. If damaged proteins are not removed, there is a high probability that lens clouding and cataract will occur. A study was done to determine if the lens contains the enzymes necessary to degrade various lens proteins. Three proteins were chosen: (1) alpha crystallin, the major lens protein; (2) histone H2A, a component of the DNA machinery for protein synthesis; and (3) actin, a protein necessary for the movement and structure of lens cells. It was found that 26 percent of the histone H2A was broken down by lens cell enzymes, but only 2.5 percent and 3.3 percent of the alpha crystallin and actin, respectively, were broken down. This suggests that histone H2A is processed by the lens when it becomes obsolete, but that alpha crystallin and actin are required for the normal functioning of the cell and are not broken down as readily. Cells also have been prepared from bovine lenses which can be grown in the laboratory. Degradation of protein in these cells is used as a model for protein degradation in the lens. It was found that protein degradation capability is dependent on calcium in these cultured bovine lens cells. A specific calcium dependent enzyme (calpain) has been identified in these cells. This information demonstrates the merits of the cultured lens cell system for studying calcium dependent protein degradation.

NUTRIENT INTAKE AND SENILE CATARACT

Relatively little is known about factors which modify senile cataract risk even though cataracts are an important cause of disability. Care of patients with cataracts costs billions of dollars annually. Evidence that nutrition plays a role in the development of senile cataracts in humans is limited, but available data suggest that higher intakes of vitamins C and E, and carotenoids may reduce cataract risk. To examine the role of nutrition in cataract formation, food consumption and vitamin supplement use were assessed in 77 persons with senile cataracts and 35 persons with clear lenses. Subjects who reported consuming less than 250 g of folate per day were six times more likely to have cataracts than subjects who reported consuming more than 725 g per day. Subjects reporting vitamin C intakes below 125 mg

per day were four times more likely to have cataracts than subjects with intakes greater than 490 mg per day. Persons consuming 3.5 or fewer servings of fruits and vegetables per day were almost five times more likely to have cataracts than persons consuming more than 8.5 servings per day. Although these results are preliminary, they support existing evidence of a relationship between vitamin C and cataract, and indicate that further examination of the previously reported relationship between folate and cataract is warranted.

EXERCISE-INDUCED MUSCLE DAMAGE IN OLDER MEN

Eccentric exercise resists force and absorbs the mechanical energy imposed by the environment. Walking downhill, lowering a weight and lowering oneself into a chair are examples of eccentric exercise. Eccentric exercise is a component of all physical activity. It has been found that eccentric exercise results in muscle damage which can last for an extended period of time. Prior USDA research shows that in young men who perform similar exercise, approximately 5 percent of the muscle fiber show evidence of damage. Although delayed soreness and stiffness may result, the muscle damage is repaired without any residual dysfunction or scarring. This study was to examine the effects of eccentric exercise on skeletal muscle structure using electron microscopy in men, 59-63 years of age, performing a similar amount of eccentric exercise. Almost 50 percent of the fibers examined in these older men showed evidence of damage after the exercise. Perhaps older people are more susceptible to exercise-induced muscle damage than young people because the elderly have lower muscle mass, lower fitness levels, or they may have some pre-existing muscle damage. This finding indicates that care should be taken in elderly subjects when beginning a program of increased physical activity. They should begin training slowly and avoid high intensity exercise until they have adapted to the exercise.

STRENGTH TRAINING IN NONAGENARIANS

Muscle weakness is very common in the frail elderly. This weakness and reduced mobility greatly increases the risk of falls and fractures. In a previous study, it was demonstrated that 12 weeks of weight lifting caused large increases in muscle strength and size in men aged 60 to 72 years. In this study, the ability of frail nursing home patients to respond to 8 weeks of weight lifting exercise was examined. Dietary intakes were recorded. The subjects were 10 patients of the Hebrew Rehabilitation Center for the Aged, ranging from 87 to 96 years of age. They were trained at 80 percent of the maximum lifting capacity for 3 days each week. At the start of the study, muscle strength was significantly reduced to walking speed. Most of the group did not obtain the RDA for some micronutrients from their diet. Despite this, the training program increased muscle strength by 174 percent and thigh muscle area strength increased almost 10 percent. It is concluded that strength training is feasible even in the frail elderly, leading to gains clinically relevant in muscle strength and physical performance.

NUTRITIONAL STATUS OF ELDERLY SMOKERS AND NONSMOKERS

Previous studies have suggested that smokers may have lower blood nutrient levels than nonsmokers due to some element in cigarette smoke which affects nutrient absorption or metabolism. In this study, both the diets and blood nutrient levels of 87 elderly smokers and 637 nonsmokers were examined. Differences in the nutritional status of the two groups were observed which were consistent with earlier research. Smokers' intakes of all nutrients except for vitamin B12 and folate were significantly lower than nonsmokers' intakes, after adjustment for age, sex and total caloric intake. Lower blood levels of carotenoids, retinol, riboflavin, vitamin C and magnesium and higher levels of calcium were seen in smokers compared to nonsmokers, after adjustment for age and sex. Differences in carotenoid and riboflavin levels persisted after adjustment for intakes of these nutrients. The majority of the differences in blood nutrient levels observed between smokers and nonsmokers can be explained by the poorer quality of the smokers' diets. It is likely that the small differences in intake which were observed would assume added importance in a population of elderly with marginal or inadequate nutritional status.

MAGNESIUM DEPRIVATION IN POSTMENOPAUSAL WOMEN

Because magnesium is crucial in more than 300 chemical reactions in the body, the dietary lack of it has been suggested as contributing to the cause of several human disorders, including ischemic heart disease, osteoporosis, and pregnancy complications. Although magnesium deficiency can be induced with relative ease in young experimental animals, deficiency has been found difficult to induce in

humans. In fact, efforts to produce signs of magnesium deficiency in humans simply by restricting dietary intake have been generally unsuccessful. Thus, two experiments were performed with healthy postmenopausal women since women at this stage are thought to have an increased need for magnesium. In both experiments magnesium deprivation, or 109–115 mg/2000 kcal, depressed plasma cholesterol, and changed red blood cells in a manner which suggests an alteration in their membranes. The findings indicate that significant effects do occur from low dietary intakes of magnesium in healthy adults. Some women after 52 and 64 days on the magnesium-low diet showed heart rhythm abnormalities suspected to be caused by the low magnesium intake. In one experiment a significant elevation in mean corpuscular volume and hemoglobin concentration also was observed with magnesium deprivation. These experiments help to define the importance of magnesium in human nutrition.

REFERENCE MAN AND WOMAN MORE FULLY CHARACTERIZED

Several methods exist to describe and analyze the various components of matter in living human beings. Total body neutron activation analysis, prompt-gamma neutron activation analysis, and whole body counting have been used in an adult U.S. population to determine the elemental composition of the human body. The elements measured were Potassium, Nitrogen, Calcium, Chlorine, and Phosphorus. Total body water was determined by the dilution principle using stable isotope labeled water (tritiated). A total of 1,374 observations were made in adults ranging in age from 20 to 90 years. Age, race, sex, and size-specific differences were evident. When equations were developed that predicted the elemental composition of the adult on the basis of age, weight, and height, variation in the age groups was up to 10 percent. Age-specific values for the 20- to 29-year-old white population were also compared with values for the International Commission on Radiological Protection Reference Man. The "average" young adult U.S. male is larger than Reference Man; the data also indicated a larger skeletal mass, more lean tissue and body water but less body sodium. However, when the *in vivo* prediction equations were used to adjust for size differences, good agreement was found between the expected values and for Reference Man. These data provide the first estimates of body composition for Reference Women. These techniques can also be used to examine the effects of diet, growth, aging, or malnutrition in living infants and children.

LONG-TERM FISH OIL SUPPLEMENTATION AND VITAMIN E STATUS OF WOMEN

With the renewed interest in fish oil for the prevention of disease, potentially harmful effects of fish oil products have been overlooked. The effect of fish oil supplementation was investigated in 15 young and 10 older women using 6 capsules/day (concentrated fish oil containing 400 mg omega-3 fatty acids and 1 IU of vitamin E per capsule) for 3 months. We found that plasma triglyceride level was significantly reduced in both groups with fish oil supplementation. This reduction was concomitant with a significant increase in plasma omega-3 fatty acids. However, the plasma level of lipid peroxides was increased significantly despite the increase in plasma vitamin E to triglyceride ratio. This was most pronounced in older women. Lipid peroxides are toxic substances and are oxidative products of omega-3 as well as other polyunsaturated fatty acids (PUFA). The level of these products may increase when the level of vitamin E relative to PUFA decreases or when other oxidative stresses are introduced. The results indicate that long-term intake of fish oil capsules increases lipid peroxide levels in the bodies of both young and older subjects. The data suggests that it may be necessary to increase vitamin E content of fish oil capsules or, alternatively, the users of fish oil capsules should increase their vitamin E intake.

FAMILIAL LIPOPROTEIN DISORDERS IN PATIENTS WITH CORONARY DISEASE

Genetic lipid disorders were examined in 102 families of patients with heart disease. Cholesterol lipoprotein levels and apolipoprotein levels were determined on the patient and family members. It was found that half of the patients had a genetic form of lipid disorder, most frequently being Lp(a) excess (a genetic condition predisposing to heart disease but not affected by diet), and disorders associated with low HDL cholesterol. It was concluded that these genetic lipoprotein disorders are common in subjects with premature coronary artery disease and such patients, as well as their children, should be checked for such genetic disorders.

DIETARY FAT INFLUENCED FECAL MUTAGENICITY IN WOMEN

Cancer of the colon is a major cause of cancer deaths in this country, accounting for about 90,000 deaths/year. To a large extent, diet and lifestyle have been implicated as contributing to this high mortality. In a search for possible nutritional factors, the observation that high-risk populations (as in the United States and in Europe) generally consumed a diet rich in fat, providing about 40 percent of the total calories consumed, was taken into account. The very natural question was if dietary fat is implicated in cancer risk, what type of biological markers can we use to correlate cancer risk with fat intake. Since an assay for fecal mutagenicity as a risk assessment marker had been developed at the Beltsville Human Nutrition Research Center, this technique was used in a study, where 31 premenopausal women were initially fed a diet containing 40 percent calories from fat, and then transferred to a diet containing 20 percent calories from fat. It was found that when dietary fat was decreased, there was a significant drop in the mutagenicity of the stools. This finding is consistent with the hypothesis that risk of colon cancer is greater in populations that consume a higher proportion of their energy as fat.

CALCIUM SUPPLEMENTS AND BONE LOSS IN POSTMENOPAUSAL WOMEN

Gradual loss of bone minerals results in the development of spontaneous fractures or osteoporosis in a large proportion of elderly women. Despite extensive investigation, there is no consensus on whether increased calcium intake will reduce bone loss. Results of a pilot study conducted at the Human Nutrition Research Center on Aging suggested that, of women beyond menopause, those most likely to benefit from calcium are the ones with low dietary intakes of calcium. Therefore, the effect of calcium supplementation was examined in this population, in a large controlled trial. Women within 5 years of menopause (perimenopausal) did not benefit from supplementation with calcium. In contrast, women beyond the perimenopausal period (postmenopausal) with low calcium intakes had reduced bone loss from the spine, hip, and radius when calcium supplements were given. This is the first demonstration in a controlled study that added calcium reduced bone loss from the spine and hip. On the basis of this study, it is recommended that postmenopausal women be urged to increase their calcium intake to approximately 800 mg daily.

EFFECTS OF INCREASED DIETARY CALCIUM AND EXERCISE ON BONE CALCIUM IN POSTMENOPAUSAL WOMEN

Physical activity has been shown to affect the rate of bone loss in postmenopausal women. To date there have been no studies that have evaluated the interaction between increased levels of physical activity and increased dietary calcium. This study examined the effects of a 1 year (4-days per week, 50 minutes per day) supervised walking program and increased dietary calcium on bone health (measured by examining the bone density of the spine, hip, and radius as well as the total amount of calcium in the body) in postmenopausal women. Four groups of women were followed: (1) women who remained sedentary and did not change their calcium intake, (2) sedentary women who increased their calcium intake by 831 mg/day, (3) walking women with no change in calcium intake, and (4) walking women who increased their calcium intake by 831 mg/day. No interaction between exercise and calcium intake was found. However, the femoral neck (in the hip) increased by 1.9 percent in the women eating the high calcium diet and decreased by 1.5 percent in those on moderate calcium intake. The exercise caused a 1.2 percent increase in the density of the lower spine while the sedentary women showed a 6 percent decrease. The data indicate that both increased dietary calcium and exercise have positive but different effects on the bone health of post-menopausal women.

REGULATION OF ACTIVE FORM OF VITAMIN D IN WOMEN

Poor absorption of calcium is thought to contribute to the problems of bone loss and osteoporosis in the elderly. The biologically active form of vitamin D, 1, 25-dihydroxyvitamin D, is important because it stimulates the intestinal absorption of calcium. This compound is formed from vitamin D in a reaction that is influenced by the serum concentrations of phosphorus and parathyroid hormone. In this investigation of 275 healthy postmenopausal women, it was found that the serum calcium concentration also directly influences the serum level of 1, 25-dihydroxyvitamin D. A low serum calcium increases and a high calcium decreases the level of the active form of vitamin D in the blood. Understanding of the regulation of 1, 25-dihydroxyvitamin D is a requisite for developing strategies to enhance calcium absorption in the elderly.

SMOKING AND BONE LOSS AMONG POSTMENOPAUSAL WOMEN

Women who smoke are known to have lower bone density than those who don't smoke. It is generally thought that smoking lowers the peak bone mass that is achieved at around age 30 years. This study was done to determine whether smoking affects the rate of bone loss in healthy postmenopausal women. Thirty-five smokers (who smoked an average of 15 cigarettes per day) and 285 nonsmokers participated in the 2-year study. In all women, the adjusted mean annualized rate of bone loss from the radius was greater among smokers than nonsmokers (-1.38 percent vs -0.07 percent per year, respectively). Similar trends were observed in the femoral neck, or calsis, and spine among women who were 6 or more years since last menses (26 smokers and 210 nonsmokers). However, both groups responded equally to calcium supplementation. When compared with nonsmokers, current smokers had accelerated rates of bone loss from the radius and similar trends at the spine, hip, and heel. Thus, smoking, even in amounts of less than one pack per day, has a negative effect on bone health in women after menopause.

4. Name of research project/study and unit, project description, and funding level of any research project applicable to problems of older Americans.

*Human Nutrition Research Center on Aging—Boston, MA***Lipoproteins Nutrition and Aging—\$1,579,084**

Objective—Our research objectives are: (1) to test the efficacy of a low-saturated fat, low cholesterol diet in lowering low density lipoprotein (LDL) cholesterol levels in elderly normal and hyperlipidemic subjects; (2) to study effects of dietary fatty acids on liver lipoproteins in the production in monkeys; (3) to study the interrelationships of diet and lipoproteins in the population; and (4) to study the regulation of intestinal lipoprotein production by fatty acids and cholesterol in vitro in Caco-2 cells.

Cell Programming and Regulation During Aging—\$470,128

Objective—Body stores of iron increase with age and may cause tissue damage. To restrict this, excess iron is taken up by ferritin. Using recent information about control of ferritin synthesis, the effect of aging on efficiency of the ferritin response will be explored and the relationship of this to tissue damage by iron will be examined.

Role of Nutritional Factors in Maintaining Bone Health in the Elderly—\$1,514,657

Objective—The objective of this lab is to improve the scientific basis for understanding and setting the intake requirements of calcium and vitamin D in aging adults. Specifically, we will define the intake of calcium and vitamin D above which skeletal mineral is maximally spared. This requires an understanding of how demographic, endocrine, and physical factors (e.g., race, sex, age, years since menopause, weight, activity level, and the ability to absorb calcium, affect the requirement of these nutrients).

Genetic Variation in Nutrient Utilization and Metabolism as Related to Requirements of Elderly—\$450,475

Objective—Determine ways in which diet affects gene expression during the aging process. Determine how genetic variability affects nutrient metabolism and dietary requirements in the elderly.

Gastrointestinal Function and Metabolism in Aging—\$1,120,132

Objective—(1) Determine how aging affects the human dietary requirements of vitamin B2 and Vitamin B6. (2) Study the effects of small intestinal bacterial overgrowth on ethanol metabolism, vitamin bioavailability, lactose intolerance and fecal enzyme concentrations. (3) Determine how aging affects carotene and vitamin A metabolism in the human and in animal models. (4) Delineate the pathways of intestinal carotene metabolism.

Function and Metabolism of Vitamin K and Vitamin K Dependent Proteins During Aging—\$920,432

Objective—Molecular, biochemical, and functional assays of vitamin K nutritional status will be developed. These methods will help determine human dietary vitamin K requirements and establish criteria for determining subclinical vitamin K defi-

ciency in humans and experimental animals. The vitamin K content and bioavailability of a variety of foods common to the American diet will be determined. Enzymes responsible for the metabolic recycling of vitamin K will be identified, isolated, purified, and characterized.

Effects of Nutrition and Aging on Eye Lens Proteins, Proteases, and Cataract—\$720,942

Objective—One-half of the eye lens cataract operations and savings of over \$1 billion would be realized if we could delay cataracts by only 10 years. We are attempting to use enhancement of dietary antioxidants, such as vitamin C, to delay damage to lens proteins and proteases. This should delay (1) cataract like lesions in eye lens preparations, and (2) cataracts in vivo.

Epidemiology Applied to Problems of Aging and Nutrition—\$1,057,744

Objective—(1) To define diet and nutritional needs of older Americans. (2) To advance methods in nutritional epidemiology. (3) To relate nutrition to cataract formation and to the function of the aging kidney, skeletal system, and cardiovascular system. (4) To define the changes in body composition associated with aging. (5) To interrelate physical activity and diet with the aging process. (6) To relate low levels of vitamin B12 with neurobehavioral function.

Relationships Between Aging, Functional Capacity, Body Composition, and Substrate Metabolism and Need—\$2,569,877

Objective—To examine the effects of increased physical activity, body composition and diet on the following: (1) Peripheral insulin sensitivity and glucose metabolism; (2) Functional capacity and nutrition status of the frail, institutionalized elderly; (3) Cytokine production and whole body and skeletal muscle protein metabolism; (4) Total energy expenditure and its relationship to protein metabolism and requirements.

Nutrition and Aging in Skin Derived Cells—\$709,836

Objective—The overall objective is first to understand cutaneous aging and the impact of nutritional intake or other modifiable environmental factors on this aging process and second to devise dietary or other strategies for reducing the negative impact of such factors on the completely defined culture systems for all skin-derived cells; and analysis of the effects of various dietary antioxidants on UV-mediated cellular damage (photoaging).

Assessment of Nutritional Status and Requirements for Amino Acids and Protein in the Elderly—\$268,463

Objective—Develop refined methods of determining amino acid and protein requirements and status in the elderly and study the role of arginine in intermediary metabolism in the human.

The Role of Dietary Factors on Lipid Peroxidation and Immune Function During Aging—\$1,002,150

Objective—To determine the effect of (1) long-term vitamin E and/or fish oil supplementation in healthy subjects, lipid peroxidation, and immune function, and drug metabolism; (2) lowering total fat in the diet in older adults on immune response and eicosanoid metabolism; (3) vitamin E on exercise-induced lipid peroxidation in young and old men and the effect of vitamin E (carotenoids, vitamin C, etc.) and their interactions with polyunsaturated dietary fatty acids, including fish oils, on immune function and aging.

Bioavailability of Nutrients in the Elderly—\$1,160,887

Objective—(a) To determine the bioavailability of food folate and the impact of aging on this process. (2) To define the mechanism of body folate conservation and effect of aging. (3) To assess the folate/vitamin B12 status in the elderly with respect to cardiovascular and neuropsychiatric functions. (4) To define the mechanism of age related decreases in intestinal absorption of calcium. (5) To study the factors that influence the bioavailability of zinc and magnesium.

*Beltsville Human Nutrition Research Center, Beltsville, MD***Metabolic Effects of Dietary Fiber as Influenced by Their Conversion to Short Chain Fatty Acids—\$142,409**

Objective—To identify mechanisms by which different sources of dietary fiber and associated substances found in fruits, vegetables, and whole grains can differentially affect blood cholesterol, glucose tolerance, voluntary energy intakes, and rates of intestinal processing of macronutrients; to determine how the type and amounts of short chain fatty acids formed from these fiber sources by intestinal bacteria can influence these metabolic events.

Carbohydrate and Age Effects on Glucose Tolerance and Lipogenesis in Carbohydrate-Sensitive Models—\$139,695

Objective—To determine the effect of type of dietary carbohydrate, sex, and age on metabolism and metabolic risk factors associated with diabetes and heart disease in normal rodents and rodent models exhibiting genetic predisposition for carbohydrate-sensitivity, hypertension, and obesity.

Nutritional and Biochemical Role of Chromium in Health and Disease—\$246,107

Objective—Determine effects of low Chromium intakes of humans on variables associated with sugar and fat metabolism. Determine the effects of physical performance on trace metal metabolism. Develop sensitive methods to detect marginal signs of chromium deficiency. Determine and define the role of chromium in selected abnormalities in glucose metabolism. Determine the bioavailability of various forms of chromium.

Relationship Between Nutrition and Aging: Cholesterol, Bile Acid, and Sterol Metabolism and Fecal Mutagenicity—\$523,368

Objective—To investigate the relationship of fat and other nutrients or components of the human diet to age-related disorders, such as cancer and coronary heart disease, as reflected by changes in bile acid metabolism, fecal mutagens, hormones, serum cholesterol, platelet aggregation and other parameters affected by diet and suspected of involvement in aging disorders.

Dietary Fat Effects on Lipoprotein and Cell Membrane Phys. Chem. re Cor. Heart Disease Risk—\$379,676

Objective—To determine the effects of dietary saturated, nonunsaturated omega-3 and omega-6 polyunsaturated fatty acids and cholesterol on physical chemical parameters of plasma lipoproteins and cell or organelle membrane that are descriptive of perturbations of metabolism which modulate interactions involved in atherogenesis and coronary heart disease.

Effects of Modifying Dietary Essential Fatty Acids on Platelet Function and Eicosanoid Biosynthesis—\$456,374

Objective—To elucidate the mechanisms responsible for the physiological effects of dietary lipid modifications by studying the associated qualitative and quantitative changes of eicosanoid metabolism of essential fatty acids. To determine to what extent n-6, n-3 and n-9 series fatty acids influence the formation of those eicosanoids which are relevant to the onset and progression of the cardiovascular disease.

*Grand Forks Human Nutrition Research Center, Grand Forks, ND***Determination of Requirements and Effects of Marginal Intakes of Macro and Trace Elements in Humans—\$1,292,247**

Objective—(1) Determine minimum dietary levels of trace elements including boron, manganese, copper, magnesium, and zinc which can be consumed for 2-4 months without undesirable effects on balance, biochemistries or tests of physical and mental function. (2) Document effects of dietary intakes of trace elements including boron, manganese, copper, magnesium, and zinc which are marginally less than the minimum requirements.

Cardiovascular Growth, Metabolism, and Function: Effects of Copper, Trace Elements, and Modifying Factor—\$587,291

Objective—The copper requirements of adults need accurate measurement because human diets generally contain less copper than the amount thought to be required. The consequences of insufficient copper intakes are understood incompletely; however, animals fed insufficient copper resemble humans with some rather common impairments of old age. Work under this unit will provide new, more sensitive indices of impairment due to low copper intakes. These indices will aid in establishing the human requirement.

Western Human Nutrition Research Center, San Francisco, CA

Dietary Fats, Nutrition and Health—\$922,360

Objective—Evaluate the nutrient composition of the diet with emphasis on the quantity and quality of fats in healthy individuals and population groups. To study the metabolism of dietary fats in relation to health and absence of chronic degenerative diseases.

Diet and Antioxidant Status—\$533,670

Objective—Determine the effects of dietary fat and micronutrients on lipid peroxidation processes in vivo and antioxidant defense status. Develop methods for assessing the antioxidant defense status of individuals. Determine if tests of lipid peroxidation or antioxidant defense status can be used as functional markers of human nutritional status and as sensitive measures for determining human requirements for fats and certain micronutrients.

COOPERATIVE STATE RESEARCH SERVICE (CSRS)

Information on programs/projects impacting older Americans is included for Fiscal Year (FY) 1989 because the information for FY 90 has not yet been submitted by the State institutions (colleges/universities) implementing such activities.

AD-887 (11/88)		U.S. DEPARTMENT OF AGRICULTURE COOPERATIVE STATE RESEARCH SERVICE		CRIS ID NO. 133229	
RESEARCH WORK UNIT/PROJECT ABSTRACT CURRENT RESEARCH INFORMATION SYSTEM				DATE 30 OCT 1987	
PROBLEMS OF OLDER AMERICANS & RELATED RESEARCH				TERMINATION DATE 30 SEP 1992	
ACCESSION NO. 0133392	WORK UNIT/PROJECT NO. ALA00722	REGIONAL PROJECT NO.	CONTRACT/GRANT/AGREEMENT NO. HATCH	AGENCY IDENT. CSRS ALA	
LOCATION AUBURN UNIVERSITY AUBURN ALABAMA 36849			PERFORMING ORGANIZATION NUTRITION & FOOD SCIENCE		
INVESTIGATOR KEITH R E					
TITLE EFFECTS OF PHYSICAL ACTIVITY ON VITAMIN C REQUIREMENTS IN MAN AND GUINEA PIGS					

FISCAL YEAR	USDA APPN/ CSRS ADS	OTHER FEDERAL	NON FEDERAL	TOTAL	SYS
1989	\$12961	\$0	\$52204	\$65165	.3

OBJECTIVES:

Determine if ascorbic acid requirements are altered in human subjects engaged in vigorous physical activity. Determine how body tissue levels of ascorbic acid are affected by moderate intensity running in guinea pigs.

APPROACH:

Human subjects will be given vitamin C doses ranging from 30-120 mg/day for 8-16 wks. Subjects will be subjected to various running protocols and plasma and white blood cell vitamin C levels will be analyzed and compared. Control (not running) groups are included. Guinea pigs will be fed the requirement for vitamin C, 2x requirement and 3x requirement. 50% of the animals will be exercised inside a rotating drum treadmill. Other animals will act as sedentary controls. At the end of six weeks animals will be sacrificed and ascorbic acid content of the adrenals, liver, spleen and skeletal muscle will be analyzed. Muscle function will also be evaluated by electrical stimulation.

PROGRESS REPORT: 89/01 89/12

Effects of exercise on growth, organ weights and tissue ascorbic acid (AA) were investigated in 40 young, male guinea pigs. Procedures and AA doses levels were described in the 1988 CRIS report. Results indicated that animals receiving requirement level AA had significantly lower weight gains and liver weights and greater adrenal weights as compared to twice requirement AA animals. Kidney and adrenal AA was significantly lower in requirement animals. Exercised guinea pigs had significantly greater adrenal weights and lower liver AA (3.3 +/- 0.6 vs 3.7 +/- 0.6 mg AA/100 g tissue, exercise vs sedentary, 1 +/- SD) and adrenal AA (18.1 +/- 5.4 vs 22.9 +/- 7.9). Findings suggest that the AA requirement for guinea pigs may be greater than assumed and exercise increased AA requirements. Results of a study involving AA and immunity in the elderly have been analyzed. Sixteen women (x=77 yr) were administered AA (1000 mg/day) or a placebo for 28 days. Diet recalls were analyzed for vitamin C. Blood was analyzed for AA and humoral immunocompetence (IgG, IgM). Cellular immunity was evaluated via delayed cutaneous hypersensitivity (DCH). Baseline serum AA value were low (0.18 +/- 0.06 mg AA/100 ml) despite the fact that the women were consuming 1.5 times the Recommended Dietary Allowance for vitamin C. Serum AA in women receiving the vitamin C supplement increased significantly to 1.52 +/- 0.24 mg AA/100 ml. Serum IgG and IgM values did not change although there was a tendency for IgG values to be lower after AA.

PUBLICATIONS: 00 ADDITIONAL PUBLICATIONS

KEITH, R.E., O'KEEFE, K.A., ALT, L.A. and YOUNG, K.L. 1989. Dietary status of trained female cyclists. J. Am. Diet. Assoc. 89: 1620-1623.
O'KEEFE, K.A., KEITH, R.E., WILSON, G.D. and BLESSING, D.L. 1989. Dietary carbohydrate intake and endurance performance of trained female cyclists. Nutr. Res. 9: 819-830.
ALT, L.A. 1988. Riboflavin status of female athletes. M.S. Thesis. Auburn Univ., AL. 72 p.
STEPHAN, S.D. 1989. The effect of exercise on body composition and incidence of mammary tumors in 7, 12-dimethylbenz(a)anthracene-treated BALB/c virgin female mice fed a high fat diet. M.S. Thesis. Auburn Univ., AL. 93p.
KNIGHT, K.B. 1989. The effects of calcium supplementation on blood pressure and serum calcium in pregnant women and young adults. Ph.D. Dissertation. Auburn Univ., AL. 125 p.
BLESSING, D., KEITH, R., WILLIFORD, S., WARREN, B., STONE, M., STOESELE, L. and BARKSDALE, J. 1989. Blood lipid profiles of female athletes. S.E. Chapter, Am. Coll. Sports Med. Atlanta, Ga. Conference abst. 31.
STONE, A.H., KEITH, R.E., MAPLE, D., FLECK, S.J. and KEARNEY, J.T. 1989. Physiological adaptations during a one week junior elite weightlifting training camp. S.E. Chapter, Am. Coll. Sports Med. Atlanta, Ga. Conference abst. 61.

AD-387 (11-88)		U.S. DEPARTMENT OF AGRICULTURE COOPERATIVE STATE RESEARCH SERVICE		CRS ID NO. 733720	
RESEARCH WORK UNIT/PROJECT ABSTRACT CURRENT RESEARCH INFORMATION SYSTEM				DATE 26 DEC 1990	
PROJECTS OF OLDER AMERICANS & RELATED RESEARCH				START DATE 22 APR 1988	
ACCESSION NO. 7133597		WORK UNIT/PROJECT NO. IND087029		TERMINATION DATE 30 SEP 1993	
REGIONAL PROJECT NO.		CONTRACT/GRANT/AGREEMENT NO. MATCH		AGENCY IDENT. CSRS IND	
LOCATION PURDUE UNIVERSITY WEST LAFAYETTE INDIANA 47907		PERFORMING ORGANIZATION CHILD DEVEL & FAMILY STUDIES			
INVESTIGATORS LEWIS R					
TITLE INTERGENERATIONAL STRESSES IN RURAL AND URBAN INDIANA FAMILIES					

FISCAL YEAR	USDA APPN/ CSRS ADM	OTHER FEDERAL	NON FEDERAL	TOTAL	SYS
1989	\$7730	\$149947	\$162923	\$320600	.9

OBJECTIVES:

To examine longitudinally and in nine states the effects of normative stresses produced in rural and urban families by the young adult generation, e.g. the youth's leaving and returning home, their addictions, lifestyles, etc. To complete a comparative family study of the effects of helping behaviors between the middle-aged and aging generations in rural and urban families in Indiana and Budapest, Hungary; and to develop new instrumentation and similar comparative studies in Indiana and in one west-European, one east-European, and one Asian country, i.e., Sweden, Hungary, and Taiwan, in order to examine the relative influences of culture, political systems and economies, in addition to other familial and social variables.

APPROACH:

Longitudinal analyses of survey data on selected, normative family stresses upon intergenerational relationships in nine states; comparative analyses of intergenerational helping behavior in Budapest, Hungary and Indiana; development of measurement instruments for an elaboration of the earlier comparative intergenerational research in Sweden, Hungary, Taiwan and Indiana; and data collection and data analysis for a comparative study of intergenerational stresses in the same four countries.

PROGRESS REPORT: 88/10 89/09

Efforts have continued on the Hatch project, INTERGENERATIONAL STRESSES IN RURAL AND URBAN INDIANA FAMILIES, which began 19 months ago. Progress was made especially toward the second objective of the project, i.e., to complete comparative analyses of the reciprocity and effects of helping behaviors between the young adult, middle aged and aging generations in rural and urban families in Indiana and Hungary. Three empirical articles addressed to this area have been accepted for publication. The research grant proposal, MIDLIFE FAMILY TRANSITIONS AND INTERGENERATIONAL AID, sent to the National Institute of Child Health and Human Development and the National Institute on Aging by Dr. Lewis and Dr. Karen Altergott, in response to the RFA 88-89/AG-14, was unanimously approved but not funded. Drs. Lewis and Altergott are continuing efforts to find external funding for this programmatic research venture, which is an attempt to document how child launching affects the health, social functioning and psychological well-being of three generational families. A number of other articles and book chapters stemming from this Hatch project have also been accepted for publication.

PUBLICATIONS: 30 ADDITIONAL PUBLICATIONS

ALTERGOTT, K. and LEWIS, R.A. 1990. (In press). Social roles, kinship resources and healthfulness of retired people: A comparative perspective. In Aging and Aging, Westport, CT: Greenwood Press.
LEWIS, R.A. 1989. The family and addictions: Family Relations, 38, 254-257.
LEWIS, R.A. 1990 (in press). The adult child and older parents. In Timothy H. Brubaker (Ed.), Family relationships in later life. Los Angeles: Sage Publishing Co.
LEWIS, R.A. 1989. Men and Aging. A special issue of Nurturing Today. San Francisco: Nurturing Press.
LEWIS, R.A., and DUNCAN, S.F. 1990. (in press). Fathers and their children who leave and return home. In: D. Unger & D.R. Powell (Eds.) Families as nurturing systems.
FARBER, B., MOGEY, J.M., DEOLLOS, I. and LEWIS, R.A. 1990. (in press). Types of households as the social structure for intergenerational relations. In Aging and Aging, Westport, CT: Greenwood Press.
MOGEY, J., FARBER, B. and LEWIS, R.A. 1990. (in press). The meaning of households as the social structure for intergenerational relations. In: Aging and Aging, Westport, CT: Greenwood Press.

AD-387 (11/88)		U.S. DEPARTMENT OF AGRICULTURE COOPERATIVE STATE RESEARCH SERVICE		CSRS ID NO. 131920	
RESEARCH WORK UNIT/PROJECT ABSTRACT CURRENT RESEARCH INFORMATION SYSTEM				DATE 02 DEC 1990	
PROBLEMS OF OLDER AMERICANS & RELATED RESEARCH				TERMINATION DATE 30 SEP 1992	
ACCESSION NO. 0133658	WORK UNIT/PROJECT NO. IND097032	REGIONAL PROJECT NO.	START DATE 02 DEC 1987	CONTRACT/GRANT/AGREEMENT NO. HATCH	
LOCATION PURDUE UNIVERSITY WEST LAFAYETTE INDIANA 47907			AGENCY IDENT CSRS /ND		
INVESTIGATOR ALTERGOTT, K.					
TITLE COMMUNITY, FAMILY AND SOCIAL RESOURCES FOR AGING INDIVIDUALS					

FISCAL YEAR	USDA APPN/ CSRS ADM	OTHER FEDERAL	NON FEDERAL	TOTAL	SYS
1989	\$2755	\$0	\$14443	\$17198	.1

OBJECTIVES:

To describe change in family relations, extra-familial social relations, and social functioning over life course and family development transitions for rural and urban adults. To document the impact of policy, cultural contexts and social innovations at the state and national level on the individual and family wellbeing for older adults in urban and rural communities. To determine the impact of community resources, kin, other social relations and family life on the mental health and social functioning of rural and urban older adults facing crisis in Indiana.

APPROACH:

Measurement development and longitudinal analyses of social relations and social functioning using survey and time-budget data. Comparative analysis of data from Hungary and the U.S. in conjunction with NC-164 Family Stress in Midlife and multinational comparative analysis of time use of older adults. Collection of surveys and time-budget data from older cancer patients in rural, small town and urban areas in Indiana.

PROGRESS REPORT: 88/10 89/09

Two major activities have been undertaken in the last year. First, papers and presentations based on the project, Living with Cancer, have been prepared. A brochure, Living with Cancer, describes the social resources that help the older person with serious illness avoid depression and is designed to provide information to cancer patients and their families. In addition, presentations have been made to: oncologists, oncological nurses and other medical professionals; extension workers; professional audiences at national conferences; and, researchers in the social sciences. This project has led to the development of one research proposal (submitted to AARP Andrus Foundation) and another proposal that is being developed for submission to NIMH. Research-based articles are being submitted to journals like Aging and Health, Gerontologist, and Family Relations. No publications are in press yet. Second, the continued analysis of the national study of time use has led to several publications and article submissions. These articles, some completed and some in process, deal with the family interaction patterns in different stages of men's and women's patterns of activity in daily life, and the effect of family and kin relations on the health and well-being of adults. One forthcoming publication on this theme is on the effects of family and kin relationships on health.

PUBLICATIONS: 00 ADDITIONAL PUBLICATIONS

ALTERGOTT, K. Age, Gender and Daily Life: An Analysis of Social Involvements. Social Indicators Research. (In press).
 ALTERGOTT, K. Qualities of Daily Life and Suicide in Old Age: A Comparative Perspective. Journal of Cross-Cultural Gerontology, 4: 331-346, 1988.
 ALTERGOTT, K. Work, Family and Social Networks: Policemen's Role Evaluations: Lifestyles: Family and Economic Issues. 9 (3): 181-198. 1988.
 ALTERGOTT, K. (Ed.). Daily Life in Later Life: Comparative Perspectives. Newbury Park, CA: Sage Publications, (1988).

AD-387 (11/82)		U.S. DEPARTMENT OF AGRICULTURE COOPERATIVE STATE RESEARCH SERVICE		CRS ID NO. J33322	
RESEARCH WORK UNIT/PROJECT ABSTRACT CURRENT RESEARCH INFORMATION SYSTEM				DATE 06 DEC 1990	
PROBLEMS OF OLDER AMERICANS & RELATED RESEARCH				START DATE 01 AUG 1984	
ACCESSION NO. 0795153				TERMINATION DATE 30 SEP 1989	
WORK UNIT/PROJECT NO. IOW02706		REGIONAL PROJECT NO. NC 00178		CONTRACT/GRANT/AGREEMENT NO. HATCH	
LOCATION IOWA STATE UNIV AMES IOWA 50011		PERFORMING ORGANIZATION HOME ECONOMICS			
INVESTIGATOR ROBERT E W		WINTER M			
TITLE ECONOMIC, SOCIAL, PSYCHOLOGICAL AND HEALTH CONSEQUENCES OF THE HOUSING DECISIONS OF RURAL FAMILIES					
FISCAL YEAR 1989		USDA APPN/ CSRS ADM \$438	OTHER FEDERAL 40	NON FEDERAL \$29798	TOTAL \$30236
					SYS .1

OBJECTIVES:

To analyze the economic, social, psychological, and health consequences of housing decisions and conditions of North-Central rural families.

APPROACH:

The approach is an interdisciplinary one (economics-psychology-sociology) used to analyze social survey data with multiple regression and related statistical methods.

PROGRESS REPORT: 84/10 89/09

The results show that housing is an important element in the well-being of rural households including both farm and nonfarm households. Further, households' decisions about housing can have consequences for the well-being of the household which means that the household is an important factor in the production of its own welfare. Nevertheless, especially, for certain categories of households, the decisions of others, including various levels of government have important consequences as well. One among the many reasons why households live in rural areas is that housing costs less than in urban areas, therefore rural areas serve a special function with respect to housing. For many households who can afford the housing they want in the locations they desire, there is little problem. There are many types of households (not all of which were studied in this research) who must or desire to live in rural areas who cannot afford adequate housing because of limited resources or unusual needs. Those types of households include the elderly, the handicapped or disabled, minorities, large families, and female-headed households. Special attention needs to be paid to the consequences of governmental decisions for the affordability and adequacy of the housing for those groups. An accident of timing caused the data to be gathered in 1985, at the height of the farm crisis in the midwest. By design, 25% of the sample were farmers.

PUBLICATIONS: 00 ADDITIONAL PUBLICATIONS

NO PUBLICATIONS REPORTED THIS PERIOD.

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AD-887 (11-88)		U.S. DEPARTMENT OF AGRICULTURE COOPERATIVE STATE RESEARCH SERVICE		CRS ID NO. 111122	
RESEARCH WORK UNIT/PROJECT ABSTRACT CURRENT RESEARCH INFORMATION SYSTEM				DATE 25 DEC 1990	
PROJECTS OF OLDER AMERICANS & RELATED RESEARCH				START DATE 01 OCT 1986	
ACCESSION NO. 0099873		DOMESTIC PROJECT NO. IOWD2785		TERMINATION DATE 30 SEP 1991	
REGIONAL PROJECT NO.		CONTRACT/GRANT/AGREEMENT NO.		AGENCY IDENT.	
LOCATION IOWA STATE UNIV AMTS IOWA 50011		HATCH		CSRS IOW	
PERFORMING ORGANIZATION FOOD & NUTRITION					
PACCTA P A					
TITLE NUTRITIONAL AND METABOLIC CHARACTERISTICS OF HUMAN AGING					

FISCAL YEAR	USDA APPN/ CSRS ADM	OTHER FEDERAL	NON FEDERAL	TOTAL	SYS
1989	\$19486	\$0	\$66882	\$86368	.1

OBJECTIVES:

To assess selected aspects of nutritional status and the elderly subpopulation groups aged 65 to 85 years and older. To examine the impact of health-related practices on nutritional health of the elderly with emphasis on body weight status, habitual eating and activity pattern, use of nutrient supplements and use of drugs including alcohol consumption. To identify biological and biochemical markers that would be useful in studying the impact of nutrition on age-related changes in body composition and metabolism of the elderly.

APPROACH:

Two groups of "healthy" and free-living elderly individuals aged 65 to 84, and 85 years and older will be recruited, and carefully selected according to specified criteria. Selected factors that affect nutritional status will be examined including body weight status history, habitual eating and activity pattern, use of nutrient supplements and drugs including alcohol consumption. Biochemical markers of body composition and disease resistance will be explored.

PROGRESS REPORT: 89/01 89/12

In fall 1989, data were obtained on health behavior patterns related to nutritional status of a group of well-elderly individuals who are participating in a "Senior Services Program" in Des Moines. This information will be used in testing and developing a modified Health Belief Model. A group of 20 "very old" women including centenarians has been interviewed on nutrition and health-related practices. Hematologic data on these women will be obtained Spring '90.

PUBLICATIONS: DO ADDITIONAL PUBLICATIONS

NO PUBLICATIONS REPORTED THIS PERIOD.

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AD-387 (11/88)		U.S. DEPARTMENT OF AGRICULTURE COOPERATIVE STATE RESEARCH SERVICE		CRS D NO - 33742	
RESEARCH WORK UNIT/PROJECT ABSTRACT CURRENT RESEARCH INFORMATION SYSTEM				DATE 26 DEC 1990	
PROBLEMS OF OLDER AMERICANS & RELATED RESEARCH				START DATE 01 OCT 1989	
ACCESSION NO. 1137272		WORK UNIT/PROJECT NO. IOW02809		TERMINATION DATE 30 SEP 1991	
REGIONAL PROJECT NO. NC 00182		CONTRACT/GRANT/AGREEMENT NO. BATCH		AGENCY IDENT. CSRS IOW	
LOCATION IOWA STATE UNIV AMES IOWA 50011		PERFORMING ORGANIZATION FAMILY ENVIRONMENT			
INVESTIGATOR HIRA T K					
TITLE FAMILY RESOURCE UTILIZATION AS A FACTOR IN DETERMINING ECONOMIC WELL-BEING OF RURAL FAMILIES					

FISCAL YEAR	USDA APPN/ CSRS ADM	OTHER FEDERAL	NOM FEDERAL	TOTAL	SYS
1989	\$3851	\$0	\$13731	\$17582	.2

OBJECTIVES:

Determine and model effects of external factors, demographic characterizations and functioning styles on family resource utilization and the effects of family resource utilization in achieving family economic well-being. Develop a basis for intervention guidelines for cooperative extension educators and others helping families to maximize family economic well-being.

APPROACH:

The objectives will be implemented in following steps: 1. identification and selection of the sample, 2. development of the data collection instrument, 3. data collection using a mailed questionnaire and necessary follow-up, 4. data analysis, 5. dissemination of findings to develop basis for intervention.

PROGRESS REPORT: 89/01 89/12

Iowa data are being currently used to develop presentations, publications, theses and dissertations (see list of publications). A preliminary report is being currently prepared and will be distributed to county extension offices from where data were collected (see summary). All states have now submitted cleaned data tapes to the University of Illinois where a regional data tape is being developed. Plans are in progress to have a special issue of a journal (such as Journal of Consumer Affairs or Lifestyles, Family and Economic Issues). Researchers from different states have teamed up to prepare manuscripts. A round table discussion proposal based on regional data has been submitted to the American Council on Consumer Interest (ACCI) for the 1990 Annual Conference.

PUBLICATIONS: 00 ADDITIONAL PUBLICATIONS

HIRA, TAHIRA K. "Use of consumer debt and satisfaction with the level of living among Iowa rural older adults. Poster Presentation. American Home Economics Association. June 1989.

HIRA, TAHIRA K. Perception of changes in various aspects of community and impact of changes on household's financial situation among rural Iowans. Submitted for round table discussion for American Council on Consumer Interest (ACCI).

SUNARWAN, UJANG., THESIS, M.S. A managerial system approach to factors influencing satisfaction with financial status. Spring 1990. Ph. D. dissertation. Family well being as measured by family health symptomatology. Spring 1990.

If this information is reproduced, published, or quoted, credit must be given to the project leader and the organization conducting the research. For progress reports, it must be clearly stated that the information reflects only the results obtained during the period specified and final results are subject to completion of the investigation.

AD-87 (11/88)		U.S. DEPARTMENT OF AGRICULTURE COOPERATIVE STATE RESEARCH SERVICE		CSRS ID NO. 133227	
RESEARCH WORK UNIT/PROJECT ABSTRACT CURRENT RESEARCH INFORMATION SYSTEM				DATE 20 JAN 1990	
PROBLEMS OF OLDER AMERICANS & RELATED RESEARCH				START DATE 21 OCT 1983	
ACCESSION NO. 7332104		WORK UNIT/PROJECT NO. LAH02373		TERMINATION DATE 30 SEP 1990	
REGIONAL PROJECT NO. S 00191		CONTRACT/GRANT/ASSIGNMENT NO. HATCH		AGENCY IDENT CSRS LA.8	
LOCATION LOUISIANA STATE UNIVERSITY BATON ROUGE LOUISIANA 70893		PERFORMING ORGANIZATION SCHOOL OF HOME ECONOMICS			
INVESTIGATOR DRAUGHN P S					
TITLE FARM WIFE'S EXTERNAL EMPLOYMENT, FAMILY ECONOMIC PRODUCTIVITY, AND FAMILY FUNCTIONING					
FISCAL YEAR 1989		USDA APPN/ CSRS ADM \$13895	OTHER FEDERAL \$0	NON FEDERAL \$14215	TOTAL \$28100
					STS .2

OBJECTIVES:

Assess the relationship between external employment of wives and the economic functioning of the farm family. Assess the relationship between external employment of wives and the interpersonal relationships of the farm family.

APPROACH:

Research will consist of 5 basic steps: construction of survey instrument selection of respondents (husbands and wives in families whose principal occupation is identified as farming), data collection via responses to mailed survey, analysis of data, and reporting of findings.

PROGRESS REPORT: 89/01 89/12

The S-191 Technical Committee developed a proposal for a new project to focus on adjustments of families during transitions associated with changes on the farm as an outgrowth of concerns generated in the current project. The proposal was approved for a Southern Regional Development Committee to be formed to develop the project. Draughn led two roundtable discussions reporting a comparative analysis of generational (Group I: under 49; II, 50-64; III, over 65) differences in attitudes toward the farm as a place to raise a family, satisfaction with standard of living and life overall, attitudes toward the future of farming, and attitudes toward retirement. Findings indicated that all age groups preferred the farm as a place to raise a family, with those over 65 most strongly supportive. Satisfaction with standard of living and overall life satisfaction decreased with age group for both males and females. Based on these data, there appears to be lower satisfaction and more disillusionment among younger (under age 50) farmers. Dissatisfaction with current conditions on the farm was increasingly lower for each successively younger generation for both males and females. A comprehensive analysis of effects of off-farm employment on family economic productivity, marital adjustment, family functioning, and life satisfaction for men and women was completed and manuscript submitted for publication. In addition, a quality of life study has been completed for regional families.

PUBLICATIONS:

00 ADDITIONAL PUBLICATIONS

DRAUGHN, PS, KNAUB, PK, and WOZNIAK, PJ. 1989. Aging in rural America: implications for the future. In Draughn, PS, editor. Public Policy and Aging: Intergenerational Equity, 69-85. Louisiana State University, Baton Rouge.

DRAUGHN, PS, ROWLAND, VT, HANESS, CS, LAWRENCE, FC, and BUCO, SM. 1989. Fathers and their children: Conflict over work on the farm. Journal of Consumer Studies and Home Economics, 13, 189-197.

DRAUGHN, PS. 1989. Middle-age men: The work-family relationship. Family Perspectives, 23(1).

SELLECK, LJ, DRAUGHN, PS, WADDELL, F, and BUCO, S. 1989. Attitudes of attorneys and judges toward joint custody and its litigation. Journal of Divorce, 12(4), 103-116.

AD-80 (11-82)		U.S. DEPARTMENT OF AGRICULTURE COOPERATIVE STATE RESEARCH SERVICE		CRIS ID NO. J-192J	
RESEARCH WORK UNIT/PROJECT ABSTRACT				DATE 06 DEC 1990	
CURRENT RESEARCH INFORMATION SYSTEM				TERMINATION DATE 30 SEP 1991	
PROBLEMS OF OLDER AMERICANS & RELATED RESEARCH				START DATE 01 OCT 1988	
ACCESSION NO. 7135445	WORK UNIT/PROJECT NO. LAB02702	REGIONAL PROJECT NO.	CONTRACT/GRANT/AGREEMENT NO.	AGENCY IDENT.	
LOCATION LOUISIANA STATE UNIVERSITY BATON ROUGE LOUISIANA 70893			PERFORMING ORGANIZATION RURAL SOCIOLOGY		
AUTHOR(S) ACOCK, A. C. VILLENEVE, J. J.					
TITLE A SOCIO-DEMOGRAPHIC AND ECONOMIC PROFILE OF LOUISIANA'S RURAL INDIVIDUALS AND FAMILIES: 1970-90					
FISCAL YEAR 1989	USDA APPN/ CSRS ADM \$24508	OTHER FEDERAL \$0	NON FEDERAL \$31870	TOTAL \$56438	SYS .3

OBJECTIVES:

Description of family composition. This includes distributions on age, presence and age of children, sex, marital status, marital history, number of subfamilies in family, and household type. Description of family economic base. This includes work patterns and relative contributions of farm and off-farm work to family income. This also includes household and family income, sources of income, nature of off-farm work, travel time, means of transportation to work and industry-occupation grouping. Description of demographic characteristics of rural families. This includes education, age, mobility, poverty status. Determination of changes in these characteristics between the 1970 and 1980 census, with projections to 1990, then verification with 1990 data.

APPROACH:

The objectives will be addressed by analyzing data compiled from the 1970 and 1980 censuses as well as using other sources of demographic data.

PROGRESS REPORT: 89/01 89/12

The project has used the data assembled and collected in the first year. Current work involves using the Census Bureau's COSTAT-3 files for Louisiana and the Census of Agriculture for Louisiana. The first department publication on using this data is completed and now being duplicated for distribution. It is "Louisiana's Nonmetro Elderly: Economic and Demographic Situation." Additional socio-demographic papers are being prepared. Two additional socio-demographic papers focusing on Louisiana agriculture were published in 1989 in the Southern Rural Sociology and the LSU Agricultural Economics Review. A draft of a regional project on "Stress, Coping, and Adaptation Among Farm/Rural Families During Periods of Transitions" that focuses on changing socio-demographic and economic factors was completed. A methodological chapter on measurement error when using secondary data (such as demographic data) was published.

PUBLICATIONS: 00 ADDITIONAL PUBLICATIONS

ACOCK, ALAN C. & DELLENBARGER, ANN. 1989. The Future of Farming: Regional Variation in Opinion from Louisiana and the Nation. Southern Rural Sociology.

ACOCK, ALAN C. & DELLENBARGER, ANN. 1989. Views on Farming and Farm Assistance. LSU Agricultural Economics Review (February):51:13-16.

ACOCK, ALAN C. & KIECOLT, K. JILL. 1989. Is it Family Structure or Socioeconomic Status. Family Structure During Adolescence and Adult Adjustment. Social Forces (December).

ACOCK, ALAN C. 1989. Measurement Problems and Other Problems in Using Large Data Sets for Secondary Analysis. Research in the Sociology of Education and Socialization, Vol. 8, 201-231.

ACOCK, ALAN C. 1989. Aging in Louisiana. Department of Rural Sociology. LSU. In Press.

ACOCK, ALAN C. & HURLBERT, JEANNE. 1989. Social Network Analysis: A Structural Perspective for Family Studies. Journal of Social and Personal Relations. In Press.

HURLBERT, JEANNE & ACOCK, ALAN C. 1989. The Effects of Marital Status on the Form and Composition of Social Networks. Social Science Quarterly. In Press.

KIECOLT, K. JILL & ACOCK, ALAN C. 1989. Childhood Family Structure and Adult Psychological Well-Being of Black Americans. Sociological Spectrum. In Press.

ACOCK, ALAN C. & KIECOLT, K. JILL. 1989. Parental Divorce during Adolescence and

AD-387 (11/82)		U.S. DEPARTMENT OF AGRICULTURE COOPERATIVE STATE RESEARCH SERVICE		CRS ID NO J33322	
RESEARCH WORK UNIT/PROJECT ABSTRACT CURRENT RESEARCH INFORMATION SYSTEM				DATE 18 DEC 1990	
PROBLEMS OF OLDER AMERICANS & RELATED RESEARCH				TERMINATION DATE 30 SEP 1989	
ACCESSION NO. 0790427	WORK UNIT/PROJECT NO. ME03709	REGIONAL PROJECT NO. ME 00147	START DATE 01 OCT 1983	CONTRACT/GRAANT/AGREEMENT NO. HATCH	
LOCATION UNIVERSITY OF MAINE ORONO		PERFORMING ORGANIZATION HUMAN DEVELOPMENT		AGENCY IDENT. CSRS ME.	
INVESTIGATORS COOK E A		04469			
TITLE IMPROVING SENSITIVITY OF METHODS TO ASSESS NUTRIENT INTAKE AND TO PREDICT NUTRITIONAL RISK					
FISCAL YEAR 1989	USDA APPN/ CSRS ADM \$20505	OTHER FEDERAL \$0	NON FEDERAL \$18154	TOTAL \$38659	SYS .3

OBJECTIVES:

To determine practical, reliable, and cost effective methods of obtaining and evaluating dietary data. To improve the predictability of nutritional risk.

APPROACH:

Objective 1 - Portion estimation studies and coder variability studies will be carried out according to protocol established for all regional participants. Participation in a working conference to be held after two years will determine the approach to be used for further regional research related to objective 1.

Objective 2 - Dietary indicators for nutrition surveillance will be studied as a method for improving the predictability of risk among populations of low socioeconomic strata. Development of the indicators will be based on food frequency systems, food selection score cards, indicator nutrients, and bioavailability factors, mechanisms for ongoing use of the shortened food intake assessment tool will be determined.

PROGRESS REPORT: 88/10 89/09

Three-day food records, a 98-item Block Food Frequency Questionnaire, and an abbreviated version of the Block FFQ (34-item) were collected from 42 free-living male and female elderly attending summer education courses at the University of Maine. The Massachusetts Nutrient Data Bank and the block PCDAS data base were used for analyses. The three-day records showed significant correlation to the Block 98-item FFQ for most nutrients (p less than or equal to 0.05 for Kcal and 10 nutrients - vitamin A the exception); an interview assisted short FFQ (34-item) showed strong potential as a surveillance instrument to detect gross nutrient inadequacies in older adults. Protein intake among 27 free-living elderly women was assessed by use of seven-day food records, a 30-item food frequency questionnaire adapted from the Block FFQ, and a predicted food list. Analyses included an examination of portion size adjustments for the food frequency and fewer days of recording food records. Data bases used and compared included the Block PCDAS, the Massachusetts Data Bank, and Nutritionist III. Both the predicted food list and the food frequency questionnaire appeared to be useful tools in assessing risk of dietary protein depletion and both used together could be a useful surveillance instrument. Among all diet assessments used, interview-assisted methods were superior. This appears to be the protocol most useful for screening difficult populations and the method should be more fully developed.

PUBLICATIONS: 00 ADDITIONAL PUBLICATIONS

SMITH-PORTER, E. 1989. Detection of nutrient inadequacies in free-living elderly by a short food frequency questionnaire. M.S. Thesis, University of Maine, Orono, 104 p.

WHITESIDE, J.E. 1989. Evaluation of two shortened assessment methods of measuring dietary protein intake among elderly women. M.S. Thesis, University of Maine, Orono, 122 p.

AD-687 (11-88)		U.S. DEPARTMENT OF AGRICULTURE COOPERATIVE STATE RESEARCH SERVICE		CSRS ID NO. J33922	
RESEARCH WORK UNIT/PROJECT ABSTRACT CURRENT RESEARCH INFORMATION SYSTEM				DATE 06 DEC 1990	
PROBLEMS OF OLDER AMERICANS & RELATED RESEARCH				START DATE 01 NOV 1986	
ADDITIONAL NO. J132265		WORK UNIT/PROJECT NO. MICH01504		TERMINATION DATE 30 SEP 1991	
REGIONAL PROJECT NO.		CONTRACT/GRANT/AGREEMENT NO.		AGENCY IDNO.	
LOCATION MICHIGAN STATE UNIV EAST LANSING MICHIGAN 48824		HATCH FOOD SCIENCE & HUMAN NUTRITION		CSRS MICL	
INVESTIGATOR MOORE S					
TITLE EVALUATION OF NUTRITIONAL STATUS AND FOOD BEHAVIOR					

FISCAL YEAR	USDA APPW/ CSRS ADS	OTHER FEDERAL	NON FEDERAL	TOTAL	SYS
1989	\$7516	\$0	\$86965	\$94481	.3

OBJECTIVES:

To identify factors which influence lifestyle changes necessary for weight control. To examine the relative between diet and health and performance of athletes e.g. longevity and morbidity. To examine factors which influence food consumption patterns.

APPROACH:

Objective measurements of physical status & self-reported health behaviors and attitudes before and after intervention. Multivariate analysis of diet and health behaviors collected over period of 34 years. Comparison of baseline sales data from vending machines to sales data after intervention.

PROGRESS REPORT: 89/01 89/12

Weight Status of Michigan Adults. Self-reported weight status data from the 1987 Michigan Behavioral Risk Factor Survey were obtained from a random phone survey of 2285 Michigan adults. Overall overweight, but not underweight was a problem. The 22.7% prevalence of overweight in Michigan was exceeded only by West Virginia (24%), and Wisconsin and North Dakota (23%). This descriptive analysis provides a benchmark against which progress towards the 2000 Health Objectives for the Nation and changes within the state can be monitored. Nutrition Surveillance: Defining Populations at Health Risk in Michigan. Because evidence of health risk from poor nutrition is growing, a study was commissioned by the Michigan Dept of Public Health to: 1) evaluate existing state data systems for potential contributions to a statewide monitoring system; and 2) assess the type and extent of monitoring activities conducted by Michigan counties and by other states. Recommendations for a statewide nutrition surveillance system targeted food insecurity, the elderly, infant mortality and school age children. Food Pantry Use among Low Income Single Mothers in Lansing, Michigan. A request for emergency food assistance identifies a household in crisis. This exploratory study examines the demographics of the mothers and households, the management of food resources, the mother's informal social support, indices of hunger and social welfare participation.

PUBLICATIONS:

00 ADDITIONAL PUBLICATIONS
MOORE, S.M. 1989. Weight Status of Michigan Adults: Overweight, Underweight, or Just Right Spectrum. 2(1): 1-3. (A Publication from the Michigan Dept. of Public Health)
MOORE, S.M. 1988. Nutrition Surveillance in Michigan: Defining Populations at Health Risk. Lansing, Michigan: Michigan Dept of Public Health.

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AD-387 (11/82)		U.S. DEPARTMENT OF AGRICULTURE COOPERATIVE STATE RESEARCH SERVICE		CPS 0 NO. 133920	
RESEARCH WORK UNIT/PROJECT ABSTRACT CURRENT RESEARCH INFORMATION SYSTEM				DATE NO JRC 1990	
PROBLEMS OF OLDER AMERICANS & RELATED RESEARCH				START DATE 01 OCT 1986	TERMINATION DATE 30 SEP 1991
ACCESSION NO. 7132710	WORK UNIT/PROJECT NO. MICH01514	REGIONAL PROJECT NO. NE 00163	CONTRACT/GRANT/AGREEMENT NO. HATCH	AGENCY SERV. CSRS MICH	
LOCATION MICHIGAN STATE UNIV EAST LANSING MICHIGAN 48824			PERFORMING ORGANIZATION PARK & RECREATION RESOURCES		
INVESTIGATOR STYNES, D.					
TITLE TOURISM IMPACTS AND DEVELOPMENT ALTERNATIVES FROM THE LOCAL RURAL GOVERNMENT PERSPECTIVE					

FISCAL YEAR	USDA APPH/ CSRS ADM	OTHER FEDERAL	NON FEDERAL	TOTAL	SYS
1989	\$4072	\$2480	\$74733	\$81285	.5

OBJECTIVES:

Develop, evaluate, and refine a framework that allows integration of data from multiple sources to assess the relative benefits and costs of similar types of tourism to local governments throughout the Northeast and other participating states. Develop, test, and refine microcomputer models that would enable local officials to evaluate the relative costs and benefits of future tourism development alternatives.

APPROACH:

Michigan will contribute primarily to the assessment of spending, employment, and tax revenue-related impacts, and to the overall impact model development. Recurring data series on employment, sales, tax revenues, etc. will be analyzed to evaluate their suitability for measuring tourism activity and impacts within particular travel market segments at a county level. Models will be developed to explain temporal and spatial variations in selected series and to separate tourist-related impacts from the local component of some of these series based upon seasonal patterns and economic base methods. Spending profiles by tourism market segment will be developed from previous tourism market studies and case studies will be conducted in selected communities.

PROGRESS REPORT: 89/01 89/12

Estimates of local economic impact were made for the 1988 MCHA Campvention and for nine marinas serving transient boaters in Michigan. In conjunction with these studies, refinements have been made to procedures for measuring and analyzing recreation spending data. Refinements include adjustments for length of stay, instrument design, and the handling of zeros and outliers. A comprehensive approach to collecting, analyzing and using recreation spending data has been developed in cooperation with the USAE Waterways Experiment Station and a multi-state, multi-agency technical review team for the Upper Mississippi region. Spending by recreation market segments will be estimated within sectors compatible with national input-output tables. Procedures for adjusting and applying the data to individual sites in order to estimate local economic impacts will be tested this year. To assess population-related impacts at the local level, a cohort-survival migration model has been developed in a spreadsheet form. The model is being used to identify current and potential future elderly retirement areas in Michigan. We will begin a case study this year to measure the local social, economic, and fiscal impacts of a major tourist resort.

PUBLICATIONS: 00 ADDITIONAL PUBLICATIONS

STEWART, S., STYNES, D.J., and MAHONEY, E.M. 1989. Transient Boater Marketing and Economics. 1989 Marina Research, Wickford, RI: International Marina Institute. pp. 307-323.

STYNES, D.J. and MAHONEY, E.M. 1989. Recreation and travel spending vs. length of stay. Abstracts, 1989 Symposium on Leisure Research. Alexandria, VA: National Recreation and Park Association. pp. 57.

STYNES, D.J. and PETERSON, G.L. 1989. Information effects and bias in the travel cost method. Chapter 15 of Social Science and Natural Resource Recreation Management. J. Vining (Ed.). Boulder, CO: Westview Press. pp. 246-257.

PROBST, D.B. and STYNES, D.J. 1989. Collecting and analyzing Corps of Engineers Recreation Spending Data. Report submitted to USAE Waterways Experiment Station, Vicksburg, MS. 20 pp.

AD-887 (11-88)		U.S. DEPARTMENT OF AGRICULTURE COOPERATIVE STATE RESEARCH SERVICE		CRS ID NO. 44220	
RESEARCH WORK UNIT/PROJECT ABSTRACT CURRENT RESEARCH INFORMATION SYSTEM				DATE 30 DEC 1990	
PROBLEMS OF OLDER AMERICANS & RELATED RESEARCH				START DATE 01 OCT 1986	
ACCESSION NO. 0291053		WORK UNIT/PROJECT NO. MIN-27-024		TERMINATION DATE 30 SEP 1991	
REGIONAL PROJECT NO.		CONTRACT/GRANT/AGREEMENT NO. HATCH		AGENCY IDENT. CSRS MIN	
LOCATION UNIV OF MINNESOTA ST PAUL MINNESOTA		PERFORMING ORGANIZATION RURAL SOCIOLOGY		55108	
NCTAVISH, D. G.					
A STUDY OF MANAGED CONTEXTS FOR OLDER PEOPLE IN MINNESOTA					

FISCAL YEAR	USDA APPN/ CSRS ADM	OTHER FEDERAL	NON FEDERAL	TOTAL	SYS
1989	\$33890	\$0	\$7726	\$41616	-2

OBJECTIVES:

Analysis of the relationship of perspectives of nursing home administrators to staff and resident understandings of their organizational setting. Contrast rural and urban nursing home and alternative residential setting contexts for older Minnesota residents. Describe changes in stereotypes and felt legitimacy of support for older citizens on the part of Minnesota residents and nursing home administration using a through-time pilot study.

APPROACH:

This organizational study is concerned, initially, with managed contexts for older people and management norms relative to these contexts. The hypothesis is that these are related in an important although not necessarily direct or intended way and that, together with other factors, these have important consequences for older people in particular. Managed contexts and management norms and beliefs are measured using a new computer contextual content analysis approach (MCCA) which uses open-ended questions and taped conversational interviews.

PROGRESS REPORT: 89/01 89/12

CONFIDENCE IN NURSING HOMES STUDY. MCSR survey of Minnesota adults: 17% have high confidence in people running nursing homes (low compared to U.S. data on other institutions). Confidence higher: rural adults, youngest, oldest, males.

NURSING HOME CONTEXTS STUDY. Rural county study extending previous work with data on causes and consequences of the meaning of nursing homes to managers, staff and residents; mechanisms of resident "quest" theme, consequences of structural differences in meanings. Bibliography extended. Preparing inventory on distribution of types of social settings for older Minnesotans. Preparing collaborative proposal to study change in meanings with transition in residence. CULTURE INDICATORS OF MINNESOTA PERSPECTIVES ABOUT OLDER PEOPLE: Continuing analysis of a baseline year of Minnesota newspaper articles on elderly. MCCA METHODOLOGY. (computer analysis of textual data), described, assistance to other researchers. INTEREST IN STARTING A NEW BUSINESS: A Regional Resource. Overall, 13% of Minnesota adults are seriously interested (17% urban; 8% rural; 1% retired; higher among males, younger, minority, employed, and higher income). Interaction effects (e.g. rural interest raised by change in either direction. At 12-month followup of those initially interested, 24% were in business, 22% were no longer interested, and 7% or not initially interested became interested. A proposal for follow-up and extension of this study is underway with UMD CED.

PUBLICATIONS: 00 ADDITIONAL PUBLICATIONS

NCTAVISH, DONALD G. and PIERO, ELLEN B. Contextual Content Analysis, Quality and Quantity, Summer, 1989.
KNUDSEN, KJELL B. and NCTAVISH, DONALD G. Modelling Interest in Venturing, paper presented at the Babson Conference, April, 1989.
NCTAVISH, DONALD and KNUDSEN, KJELL Minnesotans' Interest in Starting New Businesses, Sociology of Rural Life, Vol. 10, No. 3, Winter/Spring, 1989.

AD-387 (11-88)		U.S. DEPARTMENT OF AGRICULTURE COOPERATIVE STATE RESEARCH SERVICE		CSES ID NO. 017720	
RESEARCH WORK UNIT/PROJECT ABSTRACT CURRENT RESEARCH INFORMATION SYSTEM				DATE 06 DEC 1989	
PROBLEMS OF OLDER AMERICANS & RELATED RESEARCH				START DATE 01 JUL 1983	TERMINATION DATE 30 SEP 1989
ACCESSION NO. 009761H	WORK UNIT/PROJECT NO. MC-00201	REGIONAL PROJECT NO.	CONTRACT/GRANT/AGREEMENT NO. HATCH	AGENCY IDENT. CSES NO.	
LOCATION UNIVERSITY OF MISSOURI COLUMBIA MISSOURI 65211			PERFORMING ORGANIZATION HUMAN ENVIRONMENTAL SCIENCES		
INVESTIGATOR MOTEN, E. J.					
TITLE HOUSEHOLD ECONOMIC BEHAVIOR AS IT RELATES TO ECONOMIC CIRCUMSTANCES AND PUBLIC POLICY					

FISCAL YEAR	USDA APPN/ CSES ADM	OTHER FEDERAL	NON FEDERAL	TOTAL	SYS
1989	\$11544	\$0	\$18960	\$30504	.3

OBJECTIVES:

Identify household savings behavior response to tax deferral provisions; and project impact of such tax laws; identify and assess conditions of economic stress of households, their impact, and household response; determine provisions for economic security by households; assess family members' perceptions and concordance in economic domain.

APPROACH:

Gather micro data on tax-deferred savings, population, and economic projections from public and private sources; project impact of tax deferral under alternative assumptions. Gather micro data on household economic behavior by mailed questionnaire; preferably do multi-state comparative analyses in cooperative regional project with appropriate multivariate statistical analyses.

PROGRESS REPORT: 89/01 89/12

National Longitudinal Surveys data on pre- and post-retirement families reveal lack of support for the life-cycle income hypothesis; while there is a tendency to reduce financial assets in later years, this is not true of total real net worth. Social Security eligibility among elderly families has positive association with private savings, but pension eligibility seems to serve as an alternative to private so private saving. Cohorts of pre- and post retirement age families in later time periods have lower real wealth than comparable cohorts in earlier periods. National Surveys of Consumer Finances data reveal that the average real income of baby boom households in the early 1980's was similar to that of a comparable age cohort in 1965, an equality achieved by increased incidence of dual-earner families. Traditionally-defined real liquid assets were lower for the baby boomers. The younger baby-boomers were doing less well financially, relative to the older segment, than was true of the younger relative to older segments of the 1965 cohort. Family life cycle stage had little effect on level of net worth of baby boomers. National tax return data reveal that tax-favored treatment of retirement savings (IRA, Keogh, & pension plans) contributes to maldistribution of income and wealth, and represents horizontal, vertical, and intergenerational inequity. The incidence and amounts of contribution to such plans are higher among those with higher incomes who defer or avoid higher rates of taxation.

PUBLICATIONS: 00 ADDITIONAL PUBLICATIONS

NO PUBLICATIONS REPORTED THIS PERIOD.

AD-887 (11/88)		U.S. DEPARTMENT OF AGRICULTURE COOPERATIVE STATE RESEARCH SERVICE		CRS ID NO. J11222	
RESEARCH WORK UNIT/PROJECT ABSTRACT CURRENT RESEARCH INFORMATION SYSTEM				DATE 06 DEC 1990	
PROBLEMS OF OLDER AMERICANS & RELATED RESEARCH				START DATE 01 JUL 1985	
ACCESSION NO. 0095995				TERMINATION DATE 30 JUN 1991	
WORK UNIT/PROJECT NO. MO-00205		REGIONAL PROJECT NO.		CONTRACT/GRANT/AGREEMENT NO. HATCH	
LOCATION UNIVERSITY OF MISSOURI COLUMBIA MISSOURI 65211		PERFORMING ORGANIZATION HUMAN ENVIRONMENTAL SCIENCES			
INVESTIGATOR WEAGLEY, R. O.					
TITLE FAMILY RESOURCE ADJUSTMENTS IN TIMES OF ECONOMIC CHANGE					

FISCAL YEAR	USDA APPN/ CSRS ADM	OTHER FEDERAL	NON FEDERAL	TOTAL	SYS
1989	\$6066	\$0	\$16725	\$22791	.3

OBJECTIVES:

To observe rural family adjustments in their choice of human and financial assets when the families are faced with certain change in their economic environment.

APPROACH:

Four annual observations of detailed asset, debt, and human capital data will be collected from a panel of 300 Missourians -- 100 farm families, 100 urban families, and 100 rural, non-farm families. The data will then be used to estimate a portfolio adjustment model. Additionally, predictive equations will be estimated for the determinants of several discrete choices, which are able to be observed while following the same families through time.

PROGRESS REPORT: 89/01 89/12

A study of investor portfolio allocation using data from the "Economic Well-being of Missouri Households" found: (1) the greater the level of assets of a household, the greater the relative proportion of the portfolio will be invested in high-risk assets; and (2) the proportion of assets held in high-risk asset categories will increase as the age of the household head increases until retirement is imminent, at which time the proportion of assets in high risk categories begins to decline. Major findings of a study of the demand for health insurance to supplement Medicare, also from the "Economic Well-being of Missouri Households" data, found that household net worth is positively associated with, and is the most significant factor of all variables tested, in the decision to purchase private health insurance. The household's decision to purchase market services rather than rely on home-produced services was also studied using the "Economic Well-being of Missouri Households" data. The market value of household members' time, particularly the wife's, was found to be an important determinant in the purchase of market commodities. This suggests that providers of various market commodities might benefit from giving more consideration to the value of the wife's time when identifying their target markets.

PUBLICATIONS:

00 ADDITIONAL PUBLICATIONS
GANNON, C. 1989. Investor Portfolio Allocation. M.S. thesis. University of Missouri--Columbia. R. Weagley, advisor.
WEAGLEY, R.O. and NCRUN, P.S. The Demand for Market Purchased, Home Producible Commodities, Home Economics Research Journal, September, 1989 (18:1).
GANNON, C.F. and WEAGLEY, R.O. Investor Portfolio Allocation: The Demand for Risk, in Proceedings of the 35th Annual Conference of the American Council on Consumer Interests (Columbia, Mo.: ACCI), pages 130-135.

AG-87 (11-88)		U.S. DEPARTMENT OF AGRICULTURE COOPERATIVE STATE RESEARCH SERVICE		CRS ID NO. 33392J	
RESEARCH WORK UNIT/PROJECT ABSTRACT CURRENT RESEARCH INFORMATION SYSTEM				DATE Jb JRG 1990	
PROBLEMS OF OLDER AMERICANS & RELATED RESEARCH				START DATE 01 SEP 1986	
ACCESSION NO. 0099095		WORK UNIT/PROJECT NO. MO-00208		TERMINATION DATE 31 AUG 1991	
REGIONAL PROJECT NO.		CONTRACT/GRANT/AGREEMENT NO.		AGENCY SIGHT	
LOCATION UNIVERSITY OF MISSOURI COLUMBIA		HATCH 65211		CSRS NO.	
INVESTIGATORS DOWDY, S. P.		PERFORMING ORGANIZATION HUMAN ENVIRONMENTAL SCIENCES			
TITLE EFFECTS OF AGING ON METABOLIC INTERACTIONS INVOLVING CALCIUM: LACTOSE, PROTEIN, AND MAGNESIUM					

FISCAL YEAR	USDA APPN/ CSRS ADM	OTHER	NON FEDERAL	TOTAL	SYS
1989	\$14389	\$0	\$55769	\$70158	.4

OBJECTIVES:

To determine the influence of aging on the nutritional interactions between calcium and lactose, calcium and protein, and calcium and magnesium.

APPROACH:

Young and old rats will be used in each of a series of studies. Adequate and deficient levels of dietary calcium will be provided to respective subsets within each age group. Superimposed upon each dietary calcium level will be one of the "interacting" components (lactose vs no lactose; high vs low protein; adequate vs deficient magnesium). Following four weeks of the particular dietary regimen, calcium nutrition will be assessed using metabolic balance and isotope absorption/retention studies. Bone strength and bone mineral content will be assayed.

PROGRESS REPORT: 89/01 89/12

Using the Fischer 344 rat as an aging model, studies have been completed which have shown that marginal magnesium (Mg) intake (similar to human intake patterns) has a differential effect on calcium (Ca) utilization in young vs older animals. Mg promotes greater Ca deposition in young bone, but seems to promote resorption (reduced Ca) in older bone. These data should be useful to nutritional efforts to promote bone integrity in older adults. A somewhat unexpected observation in these studies was an apparent negative effect of aging on Mg metabolism (similar to the well known effect of aging on Ca nutrition). The implications of this observation deserve further investigation for two primary, and possibly opposite, reasons: (1) Americans consume marginal amounts of Mg and, if aging reduces utilization, the older adult may be at greater risk of Mg deficiency; and, (2) marginal Mg intake may be advantageous to bone health in the later years. Other studies, using the same animal model, have been conducted to ascertain the influence of aluminum (Al), a component of many frequently used antacids, on both Ca and copper (Cu) nutrition - Ca because of its relationship to bone integrity & Cu because of its role in establishing the organic matrix for bone mineralization. Al was fed at levels designed to simulate human antacid usage.

PUBLICATIONS: 00 ADDITIONAL PUBLICATIONS

LINK, J., MCLEOD, S. and DOWDY, S.P. 1989. Effect of aging and varying dietary magnesium on calcium balance in rats. *FASEB J.*, 3:A645 (abst.).
MOURI, N.M., HILL, G.M., LINK, J.E., DOWDY, S.P. and ELLERSTECK. 1989. Effect of aluminum hydroxide on copper metabolism. *FASEB J.*, 3:A1072 (abst.).

If this information is reproduced, published, or quoted, credit must be given to the project leader and the organization conducting the research. For progress reports, it must be clearly stated that the information reflects only the results obtained during the period specified and final results are subject to completion of the investigation.

AD-897 (11/88)		U.S. DEPARTMENT OF AGRICULTURE COOPERATIVE STATE RESEARCH SERVICE		CSES NO. 011227	
RESEARCH WORK UNIT/PROJECT ABSTRACT CURRENT RESEARCH INFORMATION SYSTEM				DATE 26 DEC 1990	
PROBLEMS OF OLDER AMERICANS & RELATED RESEARCH				START DATE 01 JUL 1988	
ADDITIONAL NO. 7135030				TERMINATION DATE 30 JUN 1993	
WORK UNIT/PROJECT NO. MO-00467		REGIONAL PROJECT NO.		CONTRACT/DRAWING/AGREEMENT NO.	
LOCATION UNIVERSITY OF MISSOURI COLUMBIA MISSOURI		HATCH 65211		CSRS NO.	
INVESTIGATOR HELMICK S A					
TITLE ANTICIPATING CARE OF AGING PARENTS					
FISCAL YEAR 1989		USDA APPH/ CSES ADR \$5437	OTHER FEDERAL \$0	NON FEDERAL \$18588	TOTAL \$24025
					SYS .0

OBJECTIVES:

Identify the extent to which the anticipated care of aging parents is a factor in the mid-life decisions of adult children. Test a model that predicts the level and type of anticipated care of aging parents. Monitor the changes in willingness and ability to accept responsibility for aging parents, across cohorts of families.

APPROACH:

Data will be collected in a longitudinal research design from families throughout Missouri. Families will be contacted by telephone to motivate them to respond to the request to participate. The data collection method will be a mailed instrument, supplemented by telephone follow-up to assure a complete and accurate data set.

PROGRESS REPORT: 89/01 89/12

A population of parents of high school seniors in Missouri have been asked questions regarding the impact on various decision domains of the anticipated care of their aging parents. Analysis of 415 households is underway. Although demographic trends point to an increasing incidence of dependent aging family members, these respondents were generally not yet affected by the anticipation of these responsibilities. The impact of anticipated caregiving was most clearly evident for the financial resource decision domains and, for those, were strongly associated with perception of income adequacy regardless of the circumstances of the aging parents. Analysis now underway seeks to determine if there is a difference in anticipated responsibilities depending on whether the aging parent is the mother/father of wife/husband. Other analysis identifies a "target" population of families which evidence anticipated stress; i.e., those with high level of perceived responsibility, high level of anticipated need, and low level of expected ability. The wife's mother tends to pose the greatest expected level of need for financial assistance, and the husband's father, the greatest expected level of need for personal services. As a result of this study, programs can be designed and delivered to this "high risk" group to help them prepare for the eventual responsibility for aging parents.

PUBLICATIONS:

00 ADDITIONAL PUBLICATIONS

HELMICK, S. and CAVANAGH, J. Anticipating Care of Aging Parents: Impact on Resource Decision Domains. Presentation at 1989 Family Economics--Home Management Pre-session Workshop, Families in Transition, Cincinnati, Ohio, June, 1989.

AD-887 (11/88)		U.S. DEPARTMENT OF AGRICULTURE COOPERATIVE STATE RESEARCH SERVICE		CSRS ID NO. 313720	
RESEARCH WORK UNIT/PROJECT ABSTRACT CURRENT RESEARCH INFORMATION SYSTEM				DATE 06 DEC 1990	
PROBLEMS OF OLDER AMERICANS & RELATED RESEARCH				START DATE 01 OCT 1989	
ACCESSION NO. 2291536	WORK UNIT/PROJECT NO. HONB00266	REGIONAL PROJECT NO. W 00167	CONTRACT/GRANT/AGREEMENT NO. HATCH	TERMINATION DATE 30 SEP 1994	
LOCATION MONTANA STATE UNIVERSITY BOZEMAN MONTANA 59717			PERFORMING ORGANIZATION HOME ECONOMICS		
INVESTIGATOR MADOTZ-BADEN R					
TITLE WORK, STRESS, AND FAMILIES					

FISCAL YEAR 1989	USDA APPN/ CSRS ADM \$25455	OTHER FEDERAL \$0	HOW FEDERAL \$7160	TOTAL \$32615	SYS .4
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OBJECTIVES:

(1) Identify work/employment factors that (a) contribute to stress in families and (b) mediate stress. (2) Identify how work/employment decisions are made in families and how they relate to family functioning.

APPROACH:

(1) Factors of the farm/ranch retirement/transfer process that contribute to stress are hypothesized to be: the meaning of asset transfer to participants (parents and their adult children); parental selection of a successor(s); and the younger generation's knowledge about the older generation's plans. These will be assessed and correlated with stress of each family member. (2) A three-stage model of retirement/transfer (reduction of farm work, management, and ownership in that order) will be tested. It is postulated that the retirement/transfer process will affect family functioning. It is hypothesized that the greater the congruence between the actual and ideal process of the transfer, the more positive the level of family functioning. Semi and structured interviews will be used to obtain this data from a random sample of 400 farm/ranch families with the rather over 50.

PROGRESS REPORT: 89/01 89/12

In family businesses family functioning is thought to be related to how the process of retirement is managed and the manner in which the business assets are transferred to the next generation. Various factors inherent in this process, such as selection of a successor, the existence of a retirement plan, and desires to treat children equitably are thought to produce stress. Factors that mitigate this stress will be explored. Instrumentation for testing a three-stage model of retirement and transfer of work, management, and ownership of family farms is being developed in preparation for collection of data from the older generation (father and mother) and their most involved adult child and his/her spouse. Because of cost considerations, these data will be collected by mailed questionnaires. Data from the exploratory research of the retirement/transfer process in 25 intact, two-generation farm families upon which the above research is based continue to be analyzed. Three papers from this data set were presented at national meetings in the fall of 1989, one of which has been submitted to a refereed journal. Findings include relatively low stress levels among participants, suggesting that these intact families have developed adequate coping strategies. Factors related to stress include lack of a succession plan, interaction between financial satisfaction and the importance of passing the farm to the next generation, and being a member of the younger generation.

PUBLICATIONS: 00 ADDITIONAL PUBLICATIONS

NO PUBLICATIONS REPORTED THIS PERIOD.

AD-887 (11/88)		U.S. DEPARTMENT OF AGRICULTURE COOPERATIVE STATE RESEARCH SERVICE		CRS ID NO. J11222	
RESEARCH WORK UNIT/PROJECT ABSTRACT CURRENT RESEARCH INFORMATION SYSTEM				DATE 06 DEC 1990	
PROBLEMS OF OLDER AMERICANS & RELATED RESEARCH				START DATE 01 OCT 1987	
ACCESSION NO. D133377		WORK UNIT/PROJECT NO. NC02216		FEDERATION DATE 30 SEP 1992	
REGIONAL PROJECT NO. S 00216		CONTRACT/GRANT/AGREEMENT NO. HATCH		AGENCY IDENT. CSRS NC.	
LOCATION NORTH CAROLINA STATE UNIV RALEIGH		PERFORMING ORGANIZATION NORTH CAROLINA 27695 ECONOMICS & BUSINESS			
INVESTIGATOR WOHLGENANT M K		SCHREMPER R A			
TITLE CHANGING PATTERNS OF FOOD DEMAND AND CONSUMPTION BEHAVIOR					

FISCAL YEAR	USDA APPN/ CSRS ADM	OTHER FEDERAL	NON FEDERAL	TOTAL	SYS
1989	\$52595	\$2160	\$91660	\$146415	.9

OBJECTIVES:

To estimate food demand parameters with new and alternative theoretical and applied models. To measure, assess, and interpret changing patterns of food demand and consumption behavior for food policy analysis.

APPROACH:

Retail-farm linkages for food commodities will be studied with particular attention given to joint retail-farm products, forecasting performance of the econometric model developed; and estimates of demand parameters derived from the model. Further experimentation with the Fourier flexible functional form for estimating demand elasticities will be undertaken. Multiple regression and other statistical procedures will be applied to time series and national cross sectional household survey data on expenditures and consumption of various food products. The new BLS Continuing Consumer Expenditure Survey and earlier data sets will be used to analyze changes in food expenditures of elderly households and other population subgroups.

PROGRESS REPORT: 89/01 89/12

Retail-to-farm linkages research has focused in two areas: (a) refinement of an existing composite demand system for food at the farm level and (b) estimation of retail-to-farm price linkages for joint products. With regard to area (a), econometric results indicate retail demand shift variables in composite demand system can be taken as predetermined and that the food marketing cost index is an adequate proxy for movements in those input prices. Also, based on identification criteria for structural econometric models, it appears feasible to obtain unique estimates of retail demand parameters from a knowledge of the retail-to-farm price linkage specification. With regard to area (b), preliminary econometric results have been obtained for allocation of raw milk to fluid, cheese, butter, and ice cream and frozen products. In other related research, estimation of retail demand elasticities for ground beef and table cuts using two different data sets indicates extreme sensitivity of estimates to specific data set used. Another set of analyses explored newspaper advertising of fresh apples in Raleigh and Charlotte in 1976-77 and 1986-87.

Pricing scheme, variety, production location, month of sale, and retail store making the sale accounted for 80 percent of the variation in retail prices of fresh apples.

PUBLICATIONS: 00 ADDITIONAL PUBLICATIONS

WOHLGENANT, M.K. 1989. Demand for farm output in a complete system of demand functions. American Journal of Agricultural Economics. 71(2):241-252.
 LEMIEUX, C.N. and WOHLGENANT, M.K. 1989. Ex ante evaluation of the economic impact of agricultural biotechnology: the case of porcine somatotropin. American Journal of Agricultural Economics. 71(4):903-914.
 THURNAN, W.W. and WOHLGENANT, M.K. 1989. Consistent estimation of general equilibrium welfare effects. American Journal of Agricultural Economics. 71(4):1041-1045.
 GHURA, D. AND SCHREMPER, R.A. 1989. The role of product and other characteristics in determining the retail prices of fresh apples. (abstract) Southern Journal of Agricultural Economics. 21(1):179.
 WOHLGENANT, M.K. 1988. Farm-level demand for meats in a complete system of demand functions. (abstract) Western Journal of Agricultural Economics. 13(2):377.
 PRAZAO, E. 1989. Mothers work and child nutritional status. Ph.D. thesis. North Carolina State University, Raleigh, 129p.

AD-887 (11-88)		U.S. DEPARTMENT OF AGRICULTURE COOPERATIVE STATE RESEARCH SERVICE		CRS ID NO. J3322	
RESEARCH WORK UNIT/PROJECT ABSTRACT CURRENT RESEARCH INFORMATION SYSTEM				DATE 26 DEC 1990	
PROBLEMS OF OLDER AMERICANS & RELATED RESEARCH				START DATE 01 OCT 1983	
ACCESSION NO. 0092543		WORK UNIT/PROJECT NO. NC11949		TERMINATION DATE 30 SEP 1989	
REGIONAL PROJECT NO. NE 00149		CONTRACT/GRANT/AGREEMENT NO. HATCH		AGENCY IDENT. CSRS NC.	
LOCATION NORTH CAROLINA STATE UNIV FALWIGH NORTH CAROLINA 27695				PERFORMING ORGANIZATION SOCIOLOGY & ANTHROPOLOGY	
INVESTIGATORS CLIFFORD W B					
TITLE LEVELS OF MORTALITY AND ECONOMIC/SOCIAL STRUCTURE OF COUNTIES IN THE UNITED STATES					
FISCAL YEAR 1989		USDA APPW/ CSRS ADM \$27037	OTHER FEDERAL \$0	NON FEDERAL \$14935	TOTAL \$41972
					SYS .3

OBJECTIVES:

To identify and describe the geographic distribution and changes over time, at the county level, of cause-specific mortality patterns in the nation. To determine and analyze the relationships between the findings from objective 1 and the economic, social, and demographic structures of counties. To construct multidimensional typologies of counties based upon the complex network of economic and social structural linkages to cause-specific mortality rates and assess the dynamic nature of changes in these structural linkages over time for different geographic groupings of counties.

APPROACH:

The major sources of data will be standard United States Census and Vital Statistics material. Both descriptive and analytical techniques of analysis will be utilized. The geographic clustering of cause-specific age standardized mortality by sex and color will be analyzed at the national, divisional, regional, state, and county levels.

PROGRESS REPORT: 83/10 89/09

The focus of this research was an analysis of geographic variations in age-sex-race adjusted mortality rates by cause for counties in the U.S. for the period 1968 to 1980. Residence differentials were assessed using size of largest place and net-nonnet status of the counties. An analysis of hierarchically adjusted death rates suggest most of the variation between net and nonnet counties is a function of compositional differences. Broad-based rural health care policies need to emphasize the special health service needs of the elderly. A multivariate analysis assessing the importance of the ecological complex in explaining spatial variations in mortality by sex showed that environment had the greatest impact on sex differentials followed by sustenance organization. Health technology was not significant. Mortality differentials arose as a result of a complex set of circumstances requiring not only a multivariate research design, but one that takes account of the fact that different specifications of the model are needed for different community types. Our understanding of the impact of health technology, environment and sustenance organizational factors on mortality levels should enable improved evaluation of the costs and benefits of alternative health policies. The results confirm the importance of programs directed more toward altering the environment and sustenance organization structures of communities than other ecological components such as health technology systems.

PUBLICATIONS: 00 ADDITIONAL PUBLICATIONS

PARK, K.A. and CLIFFORD, W.B. 1989. Sex differentials in cardiovascular mortality: An ecological analysis. Soc. Sci. Med. 29(7):869-876.

AD-307 (11/85)		U.S. DEPARTMENT OF AGRICULTURE COOPERATIVE STATE RESEARCH SERVICE		CRS ID NO. 13112J	
RESEARCH WORK UNIT/PROJECT ABSTRACT CURRENT RESEARCH INFORMATION SYSTEM				DATE 06 DEC 1990	
PEOPLES OF OLDER AMERICANS & RELATED RESEARCH				START DATE 01 OCT 1986	TERMINATION DATE 30 SEP 1991
ACCESSION NO. 7799085	WORK UNIT/PROJECT NO. NC13978	REGIONAL PROJECT NO.	CONTRACT/GRANT/AGREEMENT NO. HATCH	AGENCY IDENT. CSRS NC.	
LOCATION NORTH CAROLINA STATE UNIV SALEIGH NORTH CAROLINA 27695			PERFORMING ORGANIZATION SOCIOLOGY & ANTHROPOLOGY		
INVESTIGATORS CLIFFORD W B LILLEY S C			TITLE DEMOGRAPHIC STRUCTURE AND PROCESSES: AN ANALYSIS OF CHANGE		

FISCAL YEAR	USDA APPN/ CSRS ADM	OTHER FEDERAL	NON FEDERAL	TOTAL	SYS
1989	\$13630	\$0	\$33077	\$46707	.4

OBJECTIVES:

To investigate the nature, direction, causes and consequences of changes in the demographic structure and processes of North Carolina as these impact on the development of rural communities.

APPROACH:

It is anticipated that most of the data for the project will come from Standard Census and Vital Statistics sources. Primary data will be gathered if possible. The analysis will involve descriptive and multivariate techniques in an effort to more fully understand demographic change. An attempt will be made to interpret the results in terms of sound program development.

PROGRESS REPORT: 89/01 89/12

In 1988, 795 North Carolina farmers and ex-farmers were reinterviewed as part of a panel of respondents. In 1988, 597 respondents were currently operating a farm and 198 had left farming. Primary reasons for leaving agriculture included age or retirement and low income from farming. In terms of off-farm work, there were two groups of farm operators. The larger group (72 percent) worked little or not at all in the non-farm sector, and a small but still substantial group (28 percent) worked practically full-time in the paid labor force. Overall, in 1987, 40 percent of operators work off the farm. Of these, most (71 percent) worked off the farm more than 200 days in 1987. Income from the farms averaged about 50 percent of total family income. Only 28 percent of the farmers reported that farming generated more than 80 percent of family income. Most households combined some off-farm employment with farming in order to generate sufficient income. There were substantial differences among farmers and ex-farmers. Ex-farmers had smaller farms and lower incomes, were slightly older, and were more likely to be black or female. Comparisons of off farm work experience between the two groups revealed that current operators were more likely than ex-operators to hold lower white collar occupations, while ex-operators were more likely to be employed in blue collar positions. In general, ex-farmers did not fare as well economically as those who continued to farm.

PUBLICATIONS:

00 ADDITIONAL PUBLICATIONS
LILLEY, S.C., SCHULMAN, M.D., HOBAN, T.J., TOMASKOVIC DEVEY, D.T. and SCHWALBE, S.L. 1989. North Carolina Farm & Rural Life Study 1988 Summary Report, North Carolina Ag. Ext. Serv., Raleigh, 25 p.

If this information is reproduced, published, or quoted, credit must be given to the project leader and the organization conducting the research. For progress reports, it must be clearly stated that the information reflects only the results obtained during the period specified and final results are subject to completion of the investigation.

AD-387 (11/88)		U.S. DEPARTMENT OF AGRICULTURE COOPERATIVE STATE RESEARCH SERVICE		CRS ID NO. 133162	
RESEARCH WORK UNIT/PROJECT ABSTRACT CURRENT RESEARCH INFORMATION SYSTEM				DATE 06 DEC 1990	
PROBLEMS OF OLDER AMERICANS & RELATED RESEARCH				START DATE 01 OCT 1987	
ACCESSION NO. 0132457		WORK UNIT/PROJECT NO. NC16019		TERMINATION DATE 30 SEP 1990	
REGIONAL PROJECT NO.		CONTRACT/GRANT/AGREEMENT NO.		AGENCY IDENT.	
HATCH		PERFORMING ORGANIZATION HOME ECONOMICS		CSRS NC.	
LOCATION UNIV OF NORTH CAROLINA GREENSBORO		NORTH CAROLINA		27412	
INVESTIGATORS KIVETT V R					
TITLE COMPARATIVE ANALYSES OF THE KINSHIP SYSTEMS AND LIFE SITUATIONS OF OLDER RURAL ADULTS					

FISCAL YEAR	USDA APPN/ CSRS ADM	OTHER FEDERAL	NON FEDERAL	TOTAL	SIS
1989	\$34252	\$0	\$27770	\$62022	.7

OBJECTIVES:

To extend analyses of four data bases acquired over 10 years on 1105 older rural adults; to replicate studies among diverse groups of the elderly (rural by-passed adults, blacks, and women); and to expand analyses of longitudinal data on the stability of the physical, social, and psychological status of older adults.

APPROACH:

A theoretical model of intergenerational solidarity will be applied to data on the collateral and lineal networks of diverse groups of adults 65 years or older and thus replicate earlier research on the general population of rural elderly. Analyses on a longitudinal data base of 418 older rural adults will be expanded to determine change over time in physical, social and psychological functioning among various subgroups (widows, blacks, and other vulnerable groups). Qualitative data (video taped interviews) on 20 survivors randomly selected will be obtained.

PROGRESS REPORT: 89/01 89/12

Another analysis of this data set examined the psychosocial determinants of morbidity among older black and white adults. The results showed that older adults could be separated into two groups, low morbidity versus high morbidity, based, in the main, upon morale. Higher morbidity diabetics had lower morale than low morbidity adults. Morbidity was not associated with race or with number of social supports. A third analysis of this data set investigated differences in the centrality of the grandfather role among older rural black and white men. Moderate support was found for the hypotheses: Black men would show higher centrality of the grandfather role than would white grandfathers, and factors influencing the role performance of older black and white grandfathers would differ. Black grandfathers had larger numbers of grandchildren living with them, gave higher levels of support to grandchildren, expressed higher levels of affect for them, and expected higher levels of assistance than did white grandfathers. Factors influencing grandfather-grandchild association were similar for the two groups of men.

However, factors influencing assistance given and received varied according to race. White grandfathers' exchanges of support were more situational than were those of black grandfathers. Preliminary analyses were also begun on a third wave of longitudinal data (thirteen year follow-up) on the survivors of an original sample of 418 older rural adults first interviewed in 1976.

PUBLICATIONS: 00 ADDITIONAL PUBLICATIONS

ANDERSON, T.B., AND KIVETT, V.R. 1989. Family support among older married partners. Program of the 10th Annual Meeting of the Southern Gerontological Society. Charleston, S.C. (p. 20). (Abstract)

GERHARDT, T., AND KIVETT, V.R. 1989. Predictors of burden among caregivers and care receivers in elder abuse situations. Program of the 10th Annual Meeting of the Southern Gerontological Association. Charleston, S.C. (p. 33). (Abstract)

KIVETT, V.R. 1989. Mother-in-law and daughter-in-law relations. 23p. In Jay A. Mancini (Ed.). Aging parents and adult children Lexington, MA: D.C. Heath and Co.

KIVETT, V.R. 1989. Factors influencing grandfather-grandchild association and helping: A racial comparison. The Gerontologist 29(319A):30.

KIVETT, V.R., AND MCCULLOCH, B.J. 1989. Support networks of the very old: Rural caregivers and care receivers (Caswell III). Interim Report to the AARP Andrus Foundation, Washington, D.C. 33p.

MCCULLOCH, B.J. 1988. A longitudinal investigation of the Philadelphia Geriatric Center Morale Scale. PhD Dissertation, University of North Carolina at Greensboro, Greensboro, N.C. 177p.

AD-387 (11/88)		U.S. DEPARTMENT OF AGRICULTURE COOPERATIVE STATE RESEARCH SERVICE		CRS ID NO. J43929	
RESEARCH WORK UNIT/PROJECT ABSTRACT CURRENT RESEARCH INFORMATION SYSTEM				DATE 06 DEC 1990	
PROBLEMS OF OLDER AMERICANS & RELATED RESEARCH				START DATE 01 JUL 1988	TERMINATION DATE 30 JUN 1990
ACCESSION NO. 0093283	WORK UNIT/PROJECT NO. WEB-91-027	REGIONAL PROJECT NO.	CONTRACT/GRANT/AGREEMENT NO.	AGENCY IDENT. CSRS WEB	
LOCATION UNIVERSITY OF NEBRASKA LINCOLN NEBRASKA 68583		PERFORMING ORGANIZATION HUMAN NUTRITION & FOOD MGST			
INVESTIGATOR BETTS M		FOUO M M			
TITLE NUTRITION PROBLEMS OF THE ELDERLY IN SOUTHEAST NEBRASKA AND METHODS OF CHANGING FOOD BEHAVIOR					

FISCAL YEAR	USDA APPW/ CSRS ADM	OTHER FEDERAL	NON FEDERAL	TOTAL	SYS
1989	\$464	\$0	\$18933	\$19397	.2

OBJECTIVES:

The objectives are to determine the nutrition status of elderly living in SE Nebraska, to determine the factors that relate to food consumption among the elderly, to determine the effectiveness of nutrition education programs, and to develop methods to evaluate nutrition education programs.

APPROACH:

Random sampling will be used when possible to select samples of elderly living in SE Nebraska. Standard research methods such as dietary recalls, Q-sort methodology and so on will be used to complete objectives 1 and 2. Nutrition education programs will be developed based on the information gathered in objectives 1 and 2 and effectiveness will be judged through comparison to other programs. Behavior change will be used to evaluate the programs. Standard Statistical methods will be used to analyze the data.

PROGRESS REPORT: 89/01 89/12

The year involved completion and submission of manuscripts as well as preparation for revising the project. Work began during the year, which is still in progress: involves body composition research and development of weight-for-height and body mass index charts from NFCS data.

PUBLICATIONS: 00 ADDITIONAL PUBLICATIONS

BETTS, M. and REZER, J. 1989. Attitudes toward food supplement use by rural and urban elderly. J. Nutr. Elderly 8(3/4):67-77.
 POWELL, C. 1989. The nutritional knowledge of nurses in a long-term care institution. M.S. Thesis, University of Nebraska-Lincoln (Nancy Betts, advisor).
 BETTS, M.M. and VULF, P.E. 1989. Impact of a nutrition education program for the elderly. Soc. for Nutr. Ed. 14(July) (Abstract).
 WHITEHEAD, D. and BETTS, M. 1989. Comparison of attitudes toward red meat and food consumption frequency between older and younger adult age groups. Sixth National Forum on Research in Aging. Sept, p. 33 (Abstract).
 BETTS, M.M. and NEWELL, S.L. 1989. Comparison of body composition standards used with rural elderly. Fed. Proc. 3(4):A1239 (#5884) (Abstract).

If this information is reproduced, published, or quoted, credit must be given to the project leader and the organization conducting the research. For program reports, it must be clearly stated that the information reflects only the results obtained during the period specified and final results are subject to completion of the investigation.

AD-887 (11/88)		U.S. DEPARTMENT OF AGRICULTURE COOPERATIVE STATE RESEARCH SERVICE		CRS ID NO. 03320	
RESEARCH WORK UNIT/PROJECT ABSTRACT CURRENT RESEARCH INFORMATION SYSTEM				DATE 06 DEC 1990	
PROJECTS OF OLDER AMERICANS & RELATED RESEARCH				TERMINATION DATE 31 DEC 1993	
ACCESSION NO. 0137003		WORK UNIT/PROJECT NO. NEB-92-015		START DATE 01 DEC 1988	
REGIONAL PROJECT NO.		CONTRACT/GRANT/AGREEMENT NO.		AGENCY BRANCH CSRS NEB	
LOCATION UNIVERSITY OF NEBRASKA LINCOLN NEBRASKA		HATCH 68583		PERFORMING ORGANIZATION EDUCATION & FAMILY RESOURCES	
INVESTIGATIONS CONRS E R					
TITLE UNDERSTANDING PROBLEMS AND POSSIBILITIES OF INDEPENDENT LIVING FOR THE RURAL ELDERLY					

FISCAL YEAR	USDA APPW/ CSRS ADM	OTHER FEDERAL	NON FEDERAL	TOTAL	SYS
1989	\$1384	\$0	\$5670	\$7054	.1

OBJECTIVES:
Investigate the interaction between housing/services needs of the elderly to maintain independent living, and housing/service provisions within the community. Make recommendations, based on the findings, that contribute to the well-being of elderly residents and the communities in which they live.

APPROACH:
Collect data, by means of personal interviews, from elderly individuals (75 years and older). Collect data, by means of mail instrument, from potential/actual service providers (social agencies, businesses, churches, family members).

PROGRESS REPORT: 89/01 89/12
The purpose of this study is to investigate the interaction between housing/service needs of elderly persons to maintain independent living and housing/service provisions within the community in which they live. Data were collected by personal interviews from 192 elderly persons over the age of 75; and, by mail questionnaire, from 355 service providers. The data from elderly respondents were analyzed to discover: a) socio-economic, health and family characteristics; b) housing characteristics; c) use of services; d) level of satisfaction; and e) differences among counties. The data from service providers were analyzed to discover: a) socio-economic characteristics; b) extent to which they provide services; c) attitudes/perceptions as to difficulty of obtaining services; who should provide; who should pay; and, d) differences among counties and by type of service provider.

PUBLICATIONS:
00 ADDITIONAL PUBLICATIONS
COMBS, E.R. 1989. Semidependent housing of elderly persons. Journal of Home Economics, 20-23.
COMBS, E.R. 1989. Housing characteristics and service use of elderly households: A survey of elderly residents in three Nebraska counties. Lincoln, NE: Department of Consumer Science and Education, UML, Dept. Report 89-1, 37 pp.
COMBS, E.R. 1989. Problems and possibilities of independent living for the frail elderly: A survey of service providers in three Nebraska counties. Lincoln, NE: Dept. of Consumer Science and Education, Dept. Report 89-2, 51 pp.
FELLOWS, E. 1989. The provision of services for the "frail" elderly from the perspective of service providers. M.S. Thesis. University of Nebraska, Lincoln.
CANADAY, C. 1989. Use of services by rural elderly persons in Knox County, Nebraska. M.S. Thesis. University of Nebraska, Lincoln.

AD-887 (11-88)		U.S. DEPARTMENT OF AGRICULTURE COOPERATIVE STATE RESEARCH SERVICE		CRS ID NO 134920	
RESEARCH WORK UNIT/PROJECT ABSTRACT CURRENT RESEARCH INFORMATION SYSTEM				DATE 06 DEC 1989	
PROBLEMS OF OLDER AMERICANS & RELATED RESEARCH				START DATE 05 NOV 1985	
ACCESSION NO. 0097317		WORK UNIT/PROJECT NO. WEB-94-013		TERMINATION DATE 30 DEC 1988	
REGIONAL PROJECT NO.		CONTRACT/GRANT/AGREEMENT NO.		AGENCY IDENT.	
LOCATION UNIVERSITY OF NEBRASKA LINCOLN NEBRASKA		MATCH 68583		CSRS WEB	
INVESTIGATORS KEAN R		PERFORMING ORGANIZATION TEXTILES, CLOTHING & DESIGN			
TITLE THE STUDY OF CLOTHING AS A CONTRIBUTOR TO THE SELF-ESTEEM OF INDIVIDUALS WITH SPECIAL NEEDS					

PISCAL YEAR	USDA APPW/ CSRS ADM	OTHER FEDERAL	NON FEDERAL	TOTAL	SYS
1989	\$100	\$0	\$18163	\$18263	-2

OBJECTIVES:

To develop and test a measurement for determining shopping behaviors (shopping behaviors is a composite of shopping patterns and attitudes). To identify clothing comfort and shopping behavior patterns by age, culture and physical limitations. To determine what relationships exist in concept of wearing and acquiring clothing with self-esteem of groups with special needs. To compare shopping behavior patterns and importance of comfort by demographic variables such as age, income, profession and socio-economic level.

APPROACH:

Samples will emphasize special need groups of elderly, physically handicapped and cultural immigrants to gather data on self-esteem, importance of clothing comfort and shopping behaviors by means of questionnaires to determine the objective.

PROGRESS REPORT: 85/06 88/12

The Clothing-Comfort Dimensions Importance by Situation Scale and the Karnos Self-Esteem instrument were used with a sample of college females and a sample of junior high school students. There were no significant differences among the college students in terms of the importance of clothing by situation, nor were there self-esteem differences. For the junior high school students there were no significant differences between the importance of clothing and self-esteem in both a social and school situation. As self-esteem increased, clothing became more important in a leisure situation. Three groups of elderly shoppers were identified using the Rosenberg self-esteem instrument and a shopping behavior scale. Self-esteem was a significant contributor to group membership among this sample. The shopping behavior instrument was modified and used in conjunction with a psychographic measurement to assess sewing orientations, which led to identification of 8 distinct groups of home sewers. Adult men and women were surveyed to determine if image congruity related to self-esteem in retail apparel store selection. No significant relationships were determined between ideal and actual congruity and levels of self-esteem, nor selection of store.

PUBLICATIONS: 00 ADDITIONAL PUBLICATIONS

KEAN, R. and VAN ZANDT, S. (1986). Self-esteem and shopping behavior patterns of elderly females. *Wellness Perspectives*, 3(3):17-21.
KEAN, R. and LEVIN, C. (1989). Orientation towards home sewing. *Clo. Tex. Res. J.*, in press.
WIDGA, C. (1989). Image congruity as correlated with self-esteem in retail apparel store selection. Unpub. Master's Thesis, University of Nebraska-Lincoln.
DATERS, C. (1986). A comparison between the importance of clothing and self-esteem among adolescents. Unpub. Ph.D. Thesis, University of Nebraska-Lincoln, 113p.
LEVIN, C. (1986). A psychographic segmentation of home sewers. Unpub. Master's Thesis, University of Nebraska-Lincoln, 118p.
WINKLER, J. (1985). Apparel shopping behaviors and self-esteem of elderly females. Unpub. Master's Thesis, University of Nebraska-Lincoln, 85p.
DATERS, C. (1989). Importance of clothing and self-esteem among adolescents. *Clo. Tex. Res. J.*, in press.

AD-387 (11/82)		U.S. DEPARTMENT OF AGRICULTURE COOPERATIVE STATE RESEARCH SERVICE		CRS ID NO. J33220	
RESEARCH WORK UNIT/PROJECT ABSTRACT CURRENT RESEARCH INFORMATION SYSTEM				DATE 26 DEC 1990	
PROBLEMS OF OLDER AMERICANS & RELATED RESEARCH				START DATE 01 JUL 1988	
ACCESSION NO. J13454		WORK UNIT/PROJECT NO. NEV00904		TERMINATION DATE 31 JUN 1991	
REGIONAL PROJECT NO.		CONTRACT/GRANT/AGREEMENT NO.		AGENCY IDENT.	
LOCATION UNIVERSITY OF NEVADA RENO NEVADA 89557		HATCH		CSRS NEV	
PERFORMING ORGANIZATION SCHOOL OF HOME ECONOMICS					
INVESTIGATOR MARTIN S K GUNN B A					
TITLE PERCEPTIONS OF ELDER CARE, PREFERENCES FOR CARE, AND RELATIONSHIP QUALITY					
FISCAL YEAR 1999					
USDA APPN/ CSRS ADM \$30324		OTHER FEDERAL \$0		NON FEDERAL \$26361	
TOTAL \$56685		SYS .6			

OBJECTIVES:

Nevada's population age 65 and over is projected to increase 265% from 1980 to 2000, the largest relative increase of any state. This increase will be most rapid in the group age 85 and over, those most likely to need care. The two major objectives for this project are to identify the extent and nature of care provided to and received by the elderly in urban and rural areas and to examine the determinants of relationship quality between caregivers and care receivers.

APPROACH:

The research will be conducted in two stages. First, a survey of approximately 4000 Nevadans will determine caregiving and care receiving activities and the needs and preferred methods for education related to these activities. Second, interviews will be conducted with dyads (givers and receivers of care) to determine the effect of identified factors on intergenerational relationship quality.

PROGRESS REPORT: 89/01 89/12

The objectives for this project are 1) to identify the extent and nature of care provided to and received by the elderly in urban and rural areas and 2) to examine the determinants of relationship quality between caregivers and care receivers. Data is being collected in two stages in this second year of a three-year project. Phase I is a survey conducted through local chapters of AARP to determine extent and kind of help received and help given and preferences for receiving care. Phase II will include interviews with care giving/care receiving dyads identified in Phase I. Preliminary findings of Phase I indicate care giver and care receiver are not mutually exclusive categories. Many are both giving and receiving care. A copy of the survey instrument is available. The interview schedule is being developed.

PUBLICATIONS: 00 ADDITIONAL PUBLICATIONS

NO PUBLICATIONS REPORTED THIS PERIOD.

AD-387 (11/82)		U.S. DEPARTMENT OF AGRICULTURE COOPERATIVE STATE RESEARCH SERVICE		CRS ID NO. J33220	
RESEARCH WORK UNIT/PROJECT ABSTRACT CURRENT RESEARCH INFORMATION SYSTEM				DATE 26 DEC 1990	
PROBLEMS OF OLDER AMERICANS & RELATED RESEARCH				START DATE 01 OCT 1989	
ACCESSION NO. J134286		WORK UNIT/PROJECT NO. MA000651		TERMINATION DATE 30 SEP 1992	
REGIONAL PROJECT NO.		CONTRACT/GRANT/AGREEMENT NO.		AGENCY IDENT.	
LOCATION UNIV OF MASSACHUSETTS AMHERST MASSACHUSETTS 01003		HATCH		CSRS MAS	
PERFORMING ORGANIZATION HOME ECONOMICS					
INVESTIGATOR ANSAET N					
TITLE STYLES OF AGING AMONG OLDER PUERTO RICANS					
FISCAL YEAR 1999					
USDA APPN/ CSRS ADM \$1805		OTHER FEDERAL \$0		NON FEDERAL \$0	
TOTAL \$1805		SYS .1			

OBJECTIVES:

To conduct research that will contribute to a better understanding of aging among Puerto Rican Americans. To actively engage in professional activities where the information generated by that research effort can be disseminated. To use the initial results of the above effort as the first step in the pursuance of funding for the development of a solid data set on older Puerto Ricans that will provide a scientific profile of the elderly for that ethnic group.

APPROACH:

Interview older Puerto Ricans (New England residents and island residents) to find answer to questions such as: How do they view aging and themselves as aged? What are their group norms regarding family and government responsibility toward the elderly? What are the main sources of personal satisfaction in old age? of problems? and How do intervening variables such as age, income, education, sex, etc. mediate their views or aging and themselves as aged? Present the results of that investigation at professional meetings. Write three articles based on the data analysis and submit them to professional journals for possible publication. Conduct in-service training for Massachusetts Extension personnel who work with Puerto Rican clients.

AD-387 (11-88)		U.S. DEPARTMENT OF AGRICULTURE COOPERATIVE STATE RESEARCH SERVICE		CRS ID NO. 233920	
RESEARCH WORK UNIT/PROJECT ABSTRACT CURRENT RESEARCH INFORMATION SYSTEM				DATE 06 DEC 1990	
PROBLEMS OF OLDER AMERICANS & RELATED RESEARCH				START DATE 01 JUL 1987	
ACCESSION NO. Q131566		WORK UNIT/PROJECT NO. NEV00905		TERMINATION DATE 30 SEP 1991	
REGIONAL PROJECT NO. W 00176		CONTRACT/GRANT/AGREEMENT NO. BATCH		AGENCY ABBV. CSRS NEV	
LOCATION UNIVERSITY OF NEVADA RENO		NEVADA		89557	
INVESTIGATOR(S) TRIPPLE P A		PERDERSEN P L			
HOUSING AND LOCATIONAL DECISIONS OF THE MATURING POPULATION: OPPORTUNITIES FOR THE WESTERN REGION					

FISCAL YEAR	USDA APPN/ CSRS ADM	OTHER FEDERAL	NON FEDERAL	TOTAL	SYN
1989	\$21470	\$0	\$27090	\$48560	.3

OBJECTIVES:

Develop a profile or selected aging populations including those who relocate, make seasonal moves, or age-in-place; Identify considerations relevant to residential characteristics, support services, and finances important to informed housing decisions; Compare rural and urban residents as to their mid- and later-life housing and locational decisions, especially rural directed relocation; and develop decision making criteria and strategies for family mid- and later-life housing and locational choices, and compare the aging population's housing and locational needs and choices and the rural communities' views and policies.

APPROACH:

State will perform all five objectives. Using zip code demography, counties with high portions of the selected populations, 40 years and over, will be identified. A mail questionnaire and common procedures will be used to collect data. To explore the potential for rural revitalization, the congruity between considerations identified by householders and attitudes of community and county governments of the desirability and feasibility of housing an aging population will be tested. Each state will contribute to a regional data base and state and regional analysis. The investigators will work with Cooperative Extension to develop and refine decision strategies for target audiences. The latter will be used to train key community and family decision makers.

PROGRESS REPORT: 89/01 89/12

Data analysis, presentations at learned society meetings and publications continues. Plans are being developed for the implementation of the next phase of the study, exploring retirees' decisions and community planning. Analysis looked at Nevadans' opinions regarding elder cottages (ECHO). Most (80%) respondents found ECHO units generally acceptable and most (65.9%) approved of ECHO units in their neighborhood, but fewer (42.1%) wanted to live in one. Females were more apt than males to find ECHO units generally acceptable and females who reported their health as fair were more apt to find them both generally and personally acceptable than persons who did not. Three states, Nevada, Oregon and Utah, collected data on wheelchair accommodation of existing owned housing. Only one percent indicated their present homes would accommodate a wheelchair, 77 percent indicated their home could be modified to accommodate a wheelchair, while 22 percent believed the cost to modify prohibitive. The most needed modifications were also the most costly (i.e. exterior entrances, kitchen counters/storage). Near the majority (46%) of the University of Nevada, Reno employees indicated they were looking forward to retirement. Data were analyzed to find out what financial sources and actions these preretirees had taken. The major source (97%) was the State Pension Plan. Over 50 percent had in place social security (78%), savings (76%), IRAs (69%).

PUBLICATIONS: 00 ADDITIONAL PUBLICATIONS

TRIPPLE, P.A. 1989. Actions & sources of planned retirement income. Home economics action showcase (p.1). Las Vegas, NV: Nevada Home Economics Association.

TRIPPLE, P.A., KEISER, M.B., OPPT, F.C. & GUNN, B.A. 1989. Elder cottage housing: A housing alternative for the older population. Housing and Society. 17:1. In press.

TRIPPLE, P.A. & PEDERSEN, P.L. 1989. Do today's homes meet retirement needs. In C.J. PECK (Ed.), Abstracts of research presentations 1989 annual meeting, American Home Economics Association (p.30). Bloomington, IL: Meridian Educ.

NAKELA, C.J., DILLMAN, J.J., JUNK, V., TRIPPLE, P.A., MCPADDEN, J.R., BAILEY, W. & TURNER, J. 1989. Housing and locational decisions: Thinking ahead to retirement. Fort Collins: Colorado State University. In press.

NAKELA, C.J. & TRIPPLE, P.A. 1989. Internationalize housing programs. Housing and Society. 16:3. In press.

MCPADDEN, J.R., BRANDT, J.A. & TRIPPLE, P.A. 1989. Housing for disabled persons: To what extent will today's homes accommodate a wheelchair. (pp. 66-76). AAHE refereed conference papers. State College, TX: American Association.

CHUN, W.Y. 1989. Influence of age and family on retirement housing decisions in Nevada. M.S. Thesis. Univ. Nevada, Reno. 123p.

AD-387 (1/88)		U.S. DEPARTMENT OF AGRICULTURE COOPERATIVE STATE RESEARCH SERVICE		CRS ID NO. 111120	
RESEARCH WORK UNIT/PROJECT ABSTRACT CURRENT RESEARCH INFORMATION SYSTEM				DATE 36 DEC 1990	
PROBLEMS OF OLDER AMERICANS & RELATED RESEARCH				START DATE 01 OCT 1983	
ACCESSION NO. 2793383		WORK UNIT/PROJECT NO. NEV00922		TERMINATION DATE 31 DEC 1999	
REGIONAL PROJECT NO. W 00167		CONTRACT/GRANT/AGREEMENT NO. HATCH		AGENCY IDENT. CSRS NEV	
LOCATION UNIVERSITY OF NEVADA RENO NEVADA 89557		PERFORMING ORGANIZATION HOME ECONOMICS			
INVESTIGATOR HALDENAN V					
TITLE COPING WITH STRESS: ADAPTATION OF NONMETROPOLITAN FAMILIES TO SOCIOECONOMIC CHANGES					

FISCAL YEAR	USDA APPW/ CSRS ADM	OTHER FEDERAL	NON FEDERAL	TOTAL	SYS
1989	\$7912	\$0	\$13971	\$21883	2

OBJECTIVES:

To assess the material and non-material resources available to families experiencing socioeconomic changes; To assess the coping strategies used by families in response to socioeconomic changes; To assess the impact of those strategies and resources on the quality and stability of relationships in families experiencing socioeconomic changes.

APPROACH:

Resources to be assessed will include human and economic resources, and problem solving strategies. The Family Crisis Oriented Personal Evaluation Scales will also be used as a measure of coping strategies. Family stability will be measured by divorce, separation and other types of family composition changes. Additional family outcomes to be studied are family member role responsibilities and transfer of resources among family members. Methodology features include the use of control groups; longitudinal design, and the study of resources and strategies intervening between socioeconomic changes and family outcomes.

PROGRESS REPORT: 83/10 89/10

Significant differences among respondents residing in different communities were identified for only four variables: age (respondents who lived in stable communities tended to be older than those in growth communities); income (respondents in growth communities had higher income); and distance traveled to buy/use goods and services (differences had to do with distance from major metropolitan area rather than the state of the local economy). Three manuscripts were developed for presentation as refereed papers at national meetings and all were accepted. Because of health problems, only two were presented. A research abstract has been submitted to AHEA. One manuscript is in review, three are in development. One master's thesis using data from the project was successfully defended. One thesis is in progress.

PUBLICATIONS: 00 ADDITIONAL PUBLICATIONS

HALDENAN, V.A. 1989. "Stress and the rural Elderly." The papers of the Western Region Home Management Family Economics Educators 4. In press.

HILTON, J.W., HALDENAN, V.A., & MARTIN, S.K. 1989. "Factor Structure of the Coping Response Indices from the Health and Daily Living Form." A refereed poster presentation at the 51st Annual Conference, Nov. 3-8 New Orleans, LA. SHOWALTER, T. 1989. An Analysis of Associations Between Active and Passive Leisure Activities and Coping Strategies When Controlled by Gender. MS Thesis, Univ. Nev., Reno. Dr. Virginia Haldeman.

AD-887 (11-88)		U.S. DEPARTMENT OF AGRICULTURE COOPERATIVE STATE RESEARCH SERVICE		CRS ID NO. J11920	
RESEARCH WORK UNIT/PROJECT ABSTRACT CURRENT RESEARCH INFORMATION SYSTEM				DATE 05 DEC 1990	
PROBLEMS OF OLDER AMERICANS & RELATED RESEARCH				START DATE 01 OCT 1984	
ACCESSION NO. 0794322		WORK UNIT/PROJECT NO. NEV00924		TERMINATION DATE 30 SEP 1990	
LOCATION UNIVERSITY OF NEVADA RENO		REGIONAL PROJECT NO. W 00153		CONTRACT/GRANT/AGREEMENT NO. HATCH	
INVESTIGATORS READ M		PERFORMING ORGANIZATION HOME ECONOMICS		AGENCY IDENT. CSRS NEV	
TITLE ECONOMIC, CYCLIC AND BEHAVIORAL FACTORS ASSOCIATED WITH VITAMIN MINERAL SUPPLEMENT USAGE					
FISCAL YEAR 1989		USDA APPN/ CSRS ADM \$15056		OTHER FEDERAL \$0	
		NON FEDERAL \$20975		TOTAL \$36031	
				SYS .3	

OBJECTIVES:

To identify attitudes and intentions which result in use of food supplements. To identify factors which result in the use of vitamin/mineral supplements under various economic determinates. To identify factors which result in cyclical use of vitamin/mineral supplements. To determine if a relationship exists between, health attitudes and intentions and actual vitamin/mineral supplementation behavior.

APPROACH:

Combination mail questionnaire and telephone interviews.

PROGRESS REPORT: 89/01 89/12

Results indicate that supplementation is still widely practiced by adults in seven Western states (over 50% of the sample indicated some type of supplement use). Multivitamin supplements are still among the most commonly used type of supplement, however, calcium supplement use is on the increase, particularly among women. Misconceptions regarding the efficacy of supplements still perpetuate and accentuate the need for effective nutrition education for consumers. Data analysis also noted that supplement use (types and amounts) increased with age. This suggests the older age cohort as a target audience for reliable, accurate supplement information. Additional analyses have indicated that cost of supplementation is tied to health changes and sources of nutrition information. If nutrition information is primarily obtained from health food stores or similar sources the cost of supplementation is greater than when nutrition information is obtained from such sources as a physician, dietitian, etc. Cyclic data is emerging with respect to supplementation, preliminary data analyses indicate that while supplementation patterns might change within a 9 month window of time, the supplementation pattern over an eighteen month period is fairly stable - that is some individuals may stop or start supplementation within a 9 month period, but return to the original supplementation pattern within 18 months.

PUBLICATIONS: 00 ADDITIONAL PUBLICATIONS

MEDEIROS, J.M., BOCK, M.A., ORTIZ, M., RAAB, C., READ, M., SCHULTZ, H., SHEEHAN, E. and WILLIAMS, D. 1989. Vitamin and mineral supplementation practices of adults in seven western states. J. Amer. Diet. Assoc. 89(3):383-386.
RAAB, C., BOCK, M.A., CARPENTER, K., MEDEIROS, D., ORTIZ, M., READ, M., SCHULTZ, H., SHEEHAN, E. and WILLIAMS, D. 1989. Targeting messages to supplement users. J. Amer. Diet. Assoc. 89: 545-546.
READ, M., FISHER, K.A., BENDEL, B., BHALLA, V.J., BOCK, M.A., HARRILL, I., MITCHELL, M., SCHULTZ, H., SHEEHAN, E. and STANDAL, B. 1989. Dietary fat intake. J. Amer. Diet. Assoc. 89(6): 830-831.
LENHART, W. and READ, M. 1989. Demographic profile and nutrient intake assessment of individuals using emergency food programs. J. Amer. Diet. Assoc. 89(12): 1812-1813.
SHEEHAN, E., DELETT, A., READ, M., BENDEL, B., BHALLA, V., BOCK, M.A., HARRILL, I., MITCHELL, M., SCHULTZ, H., and STANDAL, B. 1989. Vitamin and Food Supplement Practices and Nutrition Beliefs of the Elderly. Nutr. Resc. 9:251-258.
READ, M., BOCK, M.A., CARPENTER, K., MEDEIROS, D., ORTIZ, M., RAAB, C., SCHULTZ, H., SHEEHAN, E., and WILLIAMS, D. 1989. Health beliefs and supplement use: Adults in seven western states. J. Amer. Diet. Assoc. 89(12):1812-1813.

AD-387 (11-88)		U.S. DEPARTMENT OF AGRICULTURE COOPERATIVE STATE RESEARCH SERVICE		CRS ID NO. J319220	
RESEARCH WORK UNIT/PROJECT ABSTRACT CURRENT RESEARCH INFORMATION SYSTEM				DATE 08 DEC 1990	
PROBLEMS OF OLDER AMERICANS & RELATED RESEARCH				START DATE 01 OCT 1986	
ACCESSION NO. 0039477	WORK UNIT/PROJECT NO. NYC-159844	REGIONAL PROJECT NO.	CONTRACT/GRANT/AGREEMENT NO.	TERMINATION DATE 30 SEP 1990	AGENCY ABBV. CSRS NY.C
LOCATION ITHACA	NEW YORK	14853	HATCH	PERFORMING ORGANIZATION RURAL SOCIOLOGY	
HYCSTATIONS HICHL T A					
TITLE ECONOMIC RESTRUCTURING AND RURAL POPULATION REDISTRIBUTION					

FISCAL YEAR	USDA APPN/ CSRS ADM	OTHER FEDERAL	NON FEDERAL	TOTAL	SYS
1989	\$13752	\$128	\$28929	\$42809	.3

OBJECTIVES:

Assemble two national data files with appropriate economic and demographic variables covering the period 1970 to 1980. File I will measure individual migrant characteristics and will be used to generate migrant/nonmigrant comparisons. File II will not be used to estimate causal models. In file II multi-county areas are the unit of analysis. Estimate a simple fully recursive model of migration behavior in file II where employment by sector at time t-1 causes migration (measured by gross flows) at time t. Estimate a nonrecursive model of migration behavior where migration and employment change are simultaneously caused. Estimate a nonrecursive model of migration behavior which incorporates occupational change as an intervening variable between employment change by industry and migration. Compare the predictive power between the simple and more complex models. Apply the results to a discussion of expectations for the "end of the turnaround", the 1990 census, and future population growth in rural America.

APPROACH:

Secondary Data Analysis.

PROGRESS REPORT: 89/01 89/12

Two accomplishments resulted from the research project. First, industrial differences between rural and urban labor market areas were documented. It was demonstrated that rural labor markets have higher compositions of manufacturing, mining, agricultural services, and social services. Urban labor markets, on the other hand, have higher composition of producers services, personal services, and distributive services. Evident in the dichotomy is a rural/urban division of labor reflective of the division between manual and mental labor. Second, it was documented that age-related income transfers are correlated with rural labor market areas which specialize in social services, personal services and distributive services. In rural labor markets where the income of the population age 65 and over is relatively high, there is a greater specialization in service. The more general term, the link between the growth of rural services and elderly income is strong. In addition to these findings, a high correlation between elderly migration and growth in rural services was observed. However, the causal implications of this correlation were not determined due to statistical estimation problems. Elderly migration is highly associated with nonelderly migration, making it difficult to untangle the effects of one from the other. To resolve this problem, primary data collection would have been necessary.

PUBLICATIONS: 00 ADDITIONAL PUBLICATIONS

HIPSCHL, T.A. and LYSON, T.A. 1989. "Industrial change in New York State labor market areas." Population & Development No. 4.
HIRSCHL, T.A. and BROWN, J.W. 1980. "Teenage sexuality and childbearing in New York State." Population & Development No. 5.
HIRSCHL, T.A. 1989. "Homelessness in New York State: A socioeconomic and demographic analysis." In Homelessness in the United States. J.A. Roseni, (ed.). Westport CT. Greenwood/Praeger Pub.
HIRSCHL, T.A. 1989. "Retirement transfers and local wage rates." In Community Economic Vitality: Major Trends and Selected Issues. G.F. Summers (ed.). Ames, IA: North Central Center for Regional Development.
HIRSCHL, T.A., BLOOMQUIST, L.E. and SUMMERS, G.F. 1989. "Right-to-work legislation and local labor market growth." In Research in Rural Sociology and Development. W.W. Falk and T.A. Lyson (eds.), Greenwich, CT. JAI Press.
HIRSCHL, T.A. and SUMMERS, G.F. 1989. "Right to work and community job creation. In Community Economic Vitality: Major Trends and Selected Issues." C.F. Summers (ed.), Ames, IA: North Central Center for Regional Development.
HIRSCHL, T.A. and SUMMERS, G.F. 1989. "Retirees as a growth industry." In Community Economic Vitality: Major Trends and Selected Issues. G.G. Summers (ed.), Ames, IA.

AD-887 (11/88)		U.S. DEPARTMENT OF AGRICULTURE COOPERATIVE STATE RESEARCH SERVICE		CSRS ID NO. 11121	
RESEARCH WORK UNIT/PROJECT ABSTRACT CURRENT RESEARCH INFORMATION SYSTEM				DATE 26 DEC 1990	
PEOPLES OF OLDER AMERICANS & RELATED RESEARCH				START DATE 01 JUL 1986	
ACCESSION NO. 2793516		WORK UNIT/PROJECT NO. ARZT-136056-R-07-051		TERMINATION DATE 30 SEP 1990	
REGIONAL PROJECT NO.		CONTRACT/GRAANT/AGREEMENT NO.		AGENCY IDENT.	
LOCATION COL OF AGE UNIVERSITY OF ARIZONA TULSCON ARIZONA		HATCH 85721		CSRS ARZT	
INVESTIGATORS CHRISTOPHERSON V A		PERFORMING ORGANIZATION SCHOOL OF FAMILY & CONSUMER RESOURCES			
TITLE CONTINUITY AND ADJUSTMENT AMONG RURAL AND URBAN ELDERLY IN ARIZONA					

FISCAL YEAR	USDA APPN/ CSRS ADM	OTHER FEDERAL	NON FEDERAL	TOTAL	SYS
1989	\$923	\$3242	\$43382	\$47547	1.0

OBJECTIVES:

To determine the extent to which internal continuity among the elderly is related to: Personality variables as measured by established scales; and discontinuities as represented by selected life events. To determine the extent to which differences in internal and external continuity exist between populations of rural and urban elderly, and the nature of such differences.

APPROACH:

The approach will be a survey of rural and urban elderly (50-70 years). The subjects will be randomly selected through random-digit dialing by telephone. Subjects will be sent questionnaires and the Dillman survey techniques will be applied. A total of 600 subjects will be surveyed.

PROGRESS REPORT: 89/01 89/12

Continuity, or stability, referring to the extent to which change in marker areas takes place in the later years of life, was measured by four marker variables: alcohol usage, problem perception, self evaluation, and locus of control. Data on alcohol usage were reanalyzed from a prior study (1980), and data on the other marker variables were obtained by a mailed questionnaire from 370 urban respondents, and 200 rural respondents, aged 60 through 86. Retirement did not represent a crisis event that resulted in an increase in alcohol consumption. The amount of drinking decreased with increasing age; however, alcohol usage patterns were found to persist. There was significantly greater continuity than change among all drinking categories from abstinence to heavy (.001). Both quantity-frequency and absolute alcohol measures were utilized. Both rural and urban subjects reported an increase in problems "now" over "ten years ago." Rural reported slightly more problems than urban. Problems included adequate finances, friends, medical care, loneliness, transportation, and health. Regarding self worth, slightly more change among urban than rural. Generally, little change occurred in the ten years. Little change occurred in the locus of control measure. The rural sample reflected slightly greater externality than the urban. The study should have important implications for accurate assessment of behavior change in the later years.

PUBLICATIONS: 00 ADDITIONAL PUBLICATIONS
NO PUBLICATIONS REPORTED THIS PERIOD.

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AF-887 (11-88)		U.S. DEPARTMENT OF AGRICULTURE COOPERATIVE STATE RESEARCH SERVICE		CRS ID NO. 151120	
RESEARCH WORK UNIT/PROJECT ABSTRACT CURRENT RESEARCH INFORMATION SYSTEM				DATE 06 DEC 1990	
PROJECTS OF OLDER AMERICANS & RELATED RESEARCH				START DATE 01 OCT 1986	
ADDITIONAL NO. 2299432		WORK UNIT/PROJECT NO. AR2T-137022-R-07-022		CONTRACT/GRANT/AGREEMENT NO. 10 SEP 1991	
REGIONAL PROJECT NO. W 00176		HATCH		ASSIST. BUDGET CSRS AR2T	
LOCATION CCL OF ASR UNIVERSITY OF ARIZONA TUCSON ARIZONA		PERFORMING ORGANIZATION SCHOOL OF FAMILY & CONSUMER RESOURCES		85721	
INVESTIGATORS IAMS D J		MARION M		HAWKS D	
TITLE HOUSING AND LOCATIONAL DECISIONS OF THE MATURING POPULATION: OPPORTUNITIES FOR THE WESTERN REGION					
FISCAL YEAR 1989		USDA APPN/ CSRS ADM \$2449		OTHER FEDERAL \$581	
				NON FEDERAL \$14691	
				TOTAL \$17721	
				SYS .1	

OBJECTIVES:

Develop a profile of selected aging populations including those who relocate, make seasonal moves, or age-in-place. Identify considerations relevant to residential characteristics, support services, and finances important to informed housing decisions. Compare rural and urban residents as to their mid- and later-life housing and locational decisions, especially rural directed relocation. Develop decision making criteria and strategies for family mid- and later-life housing location choices, and compare the aging population's housing and locational needs and choices and the rural communities' views and policies.

APPROACH:

Sampling frames will be developed in each state to represent rural and urban populations. A common mail questionnaire will be administered using TDM in 1987. The proper analysis will be used for each objective 1-3. To accomplish objective 4 the results will be used to work with Cooperative Extension to develop and refine decision strategies for dissemination to target audiences. Resulting work will be published and the audio-visual materials developed.

PROGRESS REPORT: 89/01 89/12

A national research/Extension exchange seminar was conducted in conjunction with Extension Winter School on January 25 and 26, 1989. It was an opportunity for W-176 researchers in eight western states to share research findings with Extension faculty, state and county legislators, developers, and university administrators. Arizona examined environmental and public policy issues as a concern in the selection of a retirement location, as well as Cooperative Extension's role in the continuing education of retired individuals. The major environmental and public policy issues identified by respondents were a safe and adequate water supply and affordable energy. The water quality concern is supportive of Extension's efforts nationally to develop water quality educational programs. The availability of electronic equipment has vastly increased consumers' ability, including those in remote, rural areas, to participate in a non-formal, lifelong, educational system. The majority of respondents viewed renting educational videotapes as an acceptable means of continuing education. Respondents also showed little resistance to paying for Extension publications and home study courses, a positive note in the face of current budget restraints at all levels.

PUBLICATIONS: 00 ADDITIONAL PUBLICATIONS

MARION, M.H. and IAMS, D.J. 1989. Extension's role in retirement concerns of the maturing population: Proceedings for the Symposium on Research in Extension Education, Columbus, Ohio, Ohio State Univ., Dept. of Agricultural Education.

MARION, M.H. and IAMS, D.J. 1989. Maturing population concerns. Arizona Land and People. Vol. 19, No. 2, p. 39.

HAWKS, L.K., ENMEL, J., MARION, M., MERRILL, J., and SWARD, M. 1989. Using external funds to support Extension programs. In: Combs, R. (Ed) American Assoc. of Housing Educators 1989 Annual Conference Proceedings pp. 201-209.

AD-827 (11/88)		U.S. DEPARTMENT OF AGRICULTURE COOPERATIVE STATE RESEARCH SERVICE		CRR ID NO. J3142	
RESEARCH WORK UNIT/PROJECT ABSTRACT CURRENT RESEARCH INFORMATION SYSTEM				DATE JUN DEC 1990	
PATRIENS OF OLDER AMERICANS & RELATED RESEARCH				START DATE 01 OCT 1984	
ACCESSION NO. 7078392				TERMINATION DATE 30 SEP 1991	
HOURS UNIT/PROJECT NO. ARST-137089-R-23-040		REGIONAL PROJECT NO.		CONTRACT/GRANT/AGREEMENT NO. HATCH	
LOCATION COL OF AG & UNIVERSITY OF ARIZONA TUCSON ARIZONA 85721		PERFORMING ORGANIZATION NUTRITION & FOOD SCIENCE		AGENCY IDENT. CSRS ARST	
INVESTIGATOR SHEEHAN E T					
TITLE ECONOMIC AND BEHAVIORAL FACTORS ASSOCIATED WITH FOOD SUPPLEMENT USAGE					

FISCAL YEAR	USDA APPN/ CSRS ADM	OTHER FEDERAL	NON FEDERAL	TOTAL	SYS
1989	\$4288	\$1303	\$34184	\$39735	-8

OBJECTIVES:

To identify attitudes and economic factors which result in the use of food supplements. To determine if a relationship exists between health attitudes and intentions and actual vitamin/mineral supplementation behavior.

APPROACH:

To be consistent with W-153 methodology, a combination of the mail questionnaire and telephone interviews patterned after the Dillman Method will be used to solicit information on food supplement usage, health beliefs and attitudes and economic implications of food supplement usage. The sample will consist of 500 adults (over 18 years of age) per state solicited at random from telephone books of the states except California which will use a county sampling procedure. Information will be collected at three time points on the same subjects to track patterns of change. Statistical analysis will be handled at one station and all procedures will be followed at each station to insure regional consistency.

PROGRESS REPORT: 89/01 89/12

Analysis of the data continued through 1989. Regional data of the pattern of change from non-user to user or user to non-user over the three time points (mail, telephone 1 and telephone 2 surveys) was assessed. Non-users at the outset were 15.7% of the respondents with 12.6% being non-users for the three time points, whereas 17.9% were users at the outset and 18.4% were users for all three time points. The remaining percentages were distributed between six combinations of use/non-use over time. The use of supplements was higher for females than males over all three time points. A new regional project was developed and submitted in December 1989. The proposed project will take advantage of information and expertise developed in the current project. Several new states were invited to participate. The title of the new project is "Dietary Fat and Fiber: Knowledge, Practice and Disease Risk." A preliminary NIH project involving five states from the regional project was prepared and scheduled for submission in June, 1990. It responds to the Surgeon General's 1988 Report that identified the need for further research in the area of vitamin supplement usage.

PUBLICATIONS: 00 ADDITIONAL PUBLICATIONS

SHEEHAN, E., DELETT, A., READ, M., BENDEL, R., BHALLA, V., BOCK, M.A., HARRILL, I., MITCHELL, M., SCHUTZ, H. and STANDAL, B. 1989. Vitamin and food supplement practices and nutrition beliefs of the elderly. J. Nutr. Research 9:251-258.
 MEDeiros, D., BOCK, M.A., CARPENTER, K., ORTIZ, M., RAAB, C., READ, M., SCHUTZ, H., SHEEHAN, E. and WILLIAMS, D. 1989. Vitamin and mineral supplement use among adults in seven western states. J. Amer. Diet. Assoc. 89(3):383-386.
 RAAB, C., BOCK, M.A., CARPENTER, K., MEDeiros, D., ORTIZ, M., READ, M., SCHUTZ, H., SHEEHAN, E. and WILLIAMS, D. 1989. Targeting messages to supplement users. J. Amer. Diet. Assoc. 84(4):544-546.
 READ, M., FISHER, K., BENDEL, R., BHALLA, V., BOCK, M., HARRILL, I., MITCHELL, M., SCHUTZ, H., SHEEHAN, E. and STANDAL, B. 1989. Fat intake of adults: Demographics. J. Amer. Diet. Assoc. 89(6):830-831.
 READ, M., BOCK, M.A., CARPENTER, K., MEDeiros, D., ORTIZ, M., RAAB, C., SCHUTZ, H., SHEEHAN, E. and WILLIAMS, D. 1989. Health beliefs and supplement use: Adults in seven western states. J. Amer. Diet. Assoc. 89(12):1812-1813.
 READ, M., BOCK, M.A., CARPENTER, K., MEDeiros, D., ORTIZ, M., RAAB, C., SCHUTZ, H., SHEEHAN, E. and WILLIAMS, D. 1989. Health beliefs and supplement practices. 73rd Ann. Mtg. of Fed. of Amer. Soc. for Exper. Biol., New Orleans, LA.
 RAAB, C., BOCK, M.A., CARPENTER, K., MEDeiros, D., ORTIZ, M., READ, M., SCHUTZ, H.

AD-387 (11-88)		U.S. DEPARTMENT OF AGRICULTURE COOPERATIVE STATE RESEARCH SERVICE		CRS ID NO. 253929	
RESEARCH WORK UNIT/PROJECT ABSTRACT CURRENT RESEARCH INFORMATION SYSTEM				DATE 26 DEC 1990	
PROBLEMS OF OLDER AMERICANS & RELATED RESEARCH				START DATE 01 OCT 1986	
ACCESSION NO. 0399237		WORK UNIT/PROJECT NO. COL00208		TERMINATION DATE 30 SEP 1991	
REGIONAL PROJECT NO. W 00176		CONTRACT/GRANT/AGREEMENT NO. HATCH		AGENCY IDENT. CSRS COL	
LOCATION COLORADO STATE UNIV FORT COLLINS COLORADO 80523		PERFORMING ORGANIZATION DESIGN RESEARCHING & CONSUMER SCI			
INVESTIGATORS NAKELA, C. J.		TREMBLAY, K. J.			
TITLE HOUSING AND LOCATIONAL DECISIONS OF THE MATURING POPULATION: OPPORTUNITIES FOR THE WESTERN REGION					

FISCAL YEAR	USDA APPN/ CSRS ADM	OTHER FEDERAL	NON FEDERAL	TOTAL	SYS
1989	\$16964	\$0	\$11083	\$28047	.3

OBJECTIVES:

Develop a profile of selected aging populations including those who relocate, make seasonal moves, or age-in-place; 2) Identify considerations relevant to residential characteristics, support services, and finances important to informed housing decisions; Compare rural and urban residents as to their mid- and later-life housing and locational decisions, especially rural directed relocation; and (4) develop decision making criteria and strategies for family mid- and later-life housing and locational choices, and compare the aging population's housing and locational needs and choices and the rural communities' views and policies.

APPROACH:

State will perform all five objectives. Using zip code demography, counties with high portions of the selected populations, 50 years and over, will be identified. A mail questionnaire and census procedures will be used to collect data. To explore the potential for rural revitalization, the congruity between considerations identified by householders and attitudes of community and county governments of the desirability and feasibility of housing and aging population will be tested. Each state will contribute to a regional data base and state and regional analysis. The investigators will work with Cooperative Extension to develop and refine decision strategies for target audiences.

PROGRESS REPORT: 89/01 89/12

Data analysis and publication continues. Plans are being developed for the implementation of the next phase of the study exploring retirees' decisions and community planning. Analysis investigated relationships of financial retirement resources of respondents to housing and locational preferences. Financial retirement planning was measured by the anticipated number of sources of retirement income. The hypotheses tested were: 1) the mean resource level would not be related to housing preferences in the first ten years of retirement; 2) the mean resource level would not be related to size of preferred county; and 3) the mean resource level would not be related to preferred location of home in the county. The hypotheses were not accepted.

The resource level of those who preferred recreation vehicles for the first ten years of retirement were less different than those preferring apartment/townhouses and single family homes. Those who preferred to retire in counties with larger populations and in a city or city suburb expect more financial resources during retirement than those who preferred to retire in counties with smaller populations and rural areas. In addition, it was found that library and recreation facilities were more important to those who expected to have more resources during retirement.

PUBLICATIONS:

- 00 ADDITIONAL PUBLICATIONS
- NAKELA, C.J. (1989). Retirement Planning Choices in Relation to Cooperative Extension Programming. Extension Winter School, Tucson, January 25, 1989 (unpub.).
- NAKELA, C.J., DILLMAN, J.J., JUNK, V., TRIPPLE, P.A., MCFADDEN, J.R., BAILEY, W., & TURNER, J. (1989). Housing and Locational Decisions: Thinking Ahead to Retirement. Fort Collins, CO: Colorado State University (in Press).
- NAKELA, C.J. & MCFADDEN, J. (1989). Housing and Community Preferences: Are They Related to Financial Resources. Housing and Society (accepted).
- NAKELA, C.J. & TRIPPLE, P.A. (1989). A Challenge: Internationalize Housing Programs. Housing and Society, 16(3), (in press).
- NAKELA, C.J., WILSON, M. & GROENENDALE, K. (1989). Bibliography (W-176) Housing and Locational Decisions. (includes line topic areas) (unpub.).
- MCFADDEN, J.R. & NAKELA, C.J. (1989). Financing Retirement: Rural and Urban Preferences. Working with Families Conference Proceedings: Rural Families: Change and Continuity. Manhattan, KS: Kansas State University, 24.
- TRIPPLE, P.A. & NAKELA, C.J. Adaptable Housing for Lifelong Needs. Illinois Teacher Journal. (accept for pub.).

AD-87 (11-88)		U.S. DEPARTMENT OF AGRICULTURE COOPERATIVE STATE RESEARCH SERVICE		CRIS ID NO. J11114	
RESEARCH WORK UNIT/PROJECT ABSTRACT CURRENT RESEARCH INFORMATION SYSTEM				DATE 06 DEC 1990	
PROJECTS OF OLDER AMERICANS & RELATED RESEARCH				START DATE 01 OCT 1983	
ACCESSION NO. 7731627		WORK UNIT/PROJECT NO. CONS00558		TERMINATION DATE 30 SEP 1990	
REGIONAL PROJECT NO.		CONTRACT/GRANT/AGREEMENT NO. HATCH		AGENCY IDENT. CSAS COMS	
LOCATION UNIV OF CONNECTICUT STORRS CONNECTICUT 06268		PERFORMING ORGANIZATION NUTRITIONAL SCIENCES			
INVESTIGATORS FERRIS A LAMMI-KEEFE C J					
TITLE IMPROVING SENSITIVITY OF METHODS TO ASSESS NUTRIENT INTAKE AND TO PREDICT NUTRITIONAL RISK					

FISCAL YEAR 1989	USDA APPN/ CSRS ADM \$39444	OTHER FEDERAL \$111981	NON FEDERAL \$54596	TOTAL \$197021	SYS .4
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OBJECTIVES:

To determine practical, reliable, and cost effective methods of obtaining and evaluating dietary data. To improve the predictability of nutritional risk.

APPROACH:

For Objective this station will cooperate with other stations in determining food color differences and subject differences in estimating portions. For Objective this station will continue to determine the effect of lactation on women. Special emphasis will be given to diabetic women.

PROGRESS REPORT: 88/10 89/09

Regional Dietary Studies: With the Northeast Regional Nutrition Project (NE-147), we participated in a study of the reliability of the use of portion estimators on food frequency questionnaires. These data are now being analyzed at the University of Massachusetts. Diabetes and Lactation Dietary Studies: We examined between group, within group, and within subject variation of dietary intake in lactating women. Six random 24-hour recalls were collected from 42-84 postpartum. A 2-dimensional portion aid was provided for estimation of portion sizes. Analysis of variance revealed significant differences among groups ($p < .001$). Although the variance and c.v. ratios were similar between groups, the actual c.v. within and between the diabetic group was lower than the control and reference groups. Social network expansion in elderly at meals programs in Connecticut: The majority attended the program for 4 or 4+ meals/wk at the site, are functionally independent and in good health. The programs provided opportunities for social interaction and support in friendly social climates. Effect of number of 24-hr recalls on variability of nutrient estimate in the elderly: Using 3 24-hr recalls, we determined that the effect of intraindividual variability was reduced when recalls were increased from 1 to 3, compared to 3 to 7 for kcal, protein, iron, vitamin C, folate and B12. >3 recalls for fat and B6 may be needed to improve accuracy.

PUBLICATIONS: 00 ADDITIONAL PUBLICATIONS

COLLINS, S.Z., JACKSON, M.B., LAMMI-KEEFE, C.J. and JENSEN, R.G. 1989. The simultaneous separation and quantitation of human milk lipids. Lipids 24:746-749.

JENSEN, R.G., FERRIS, A.M., LAMMI-KEEFE, C.J. and HENDERSON, R.A. 1988. Human milk as a carrier of messages to the nursing infant. Nutr. Today, Nov./Dec., pp 20-25.

JENSEN, R.G., FERRIS, A.M., LAMMI-KEEFE, C.J., STEWART, C.A. and DELSAVIO, G.C. Hypcholesterolemic human milk. (Letter) J. Pediatr. Gastroenterol. Nutr. In press.

JENSEN, R.G., FERRIS, A.M., LAMMI-KEEFE, C.J. and HENDERSON, R.G. Lipids of bovine and human milks: a comparison. J. Dairy Science. Accept for pub 09/06/89. LAMMI-KEEFE, C.J., FERRIS, A.M. and JENSEN, R.G. Changes in several components in human milk every four hours from 0600 to 2200. J. Pediatr. Gastroenterol. Nutr. Accept for pub 08/01/89.

MEULAUER, J.M. 1989. Breast milk composition of diabetic women. Unpublished doctoral dissertation. University of Connecticut, Storrs. 231p.

OSTROM, K.M. 1989. A study of the hormone prolactin during lactation of insulin-dependent diabetic women: concentration in milk and serum, bioactivity and the simulated response to breastfeeding. Unpublished doctoral dissertation.

AD-89 (148)		U.S. DEPARTMENT OF AGRICULTURE COOPERATIVE STATE RESEARCH SERVICE		CNS ID NO. J3322	
RESEARCH WORK UNIT/PROJECT ABSTRACT CURRENT RESEARCH INFORMATION SYSTEM				DATE 20 DEC 1990	
PROBLEMS OF OLDER AMERICANS & RELATED RESEARCH				START DATE 01 JUL 1987	TERMINATION DATE 30 JUN 1990
ACCESSION NO. J332155	WORK UNIT/PROJECT NO. DC-0127-W	REGIONAL PROJECT NO.	CONTRACT/GRANT/AGREEMENT NO.	AGENCY IDENT. CSRS DC.	
LOCATION UNIV OF THE DISTRICT OF COLUMBIA WASHINGTON DISTRICT OF COL 20008			PERFORMING ORGANISATION HATCH BIOLOGY		
INVESTIGATOR SCOTT M J SACINE M					
TITLE LITERACY IN HEALTH-RELATED INFORMATION IN TARGETED POPULATIONS OF BLACK AND HISPANIC SENIOR CITIZENS					
FISCAL YEAR 1989		USDA APPW/ CSRS ADM \$67376	OTHER FEDERAL \$0	NON FEDERAL \$40287	TOTAL \$107663
					SYS 3

OBJECTIVES:

To evaluate and assess a data base on health-related literacy of Black and Hispanic residents of the District of Columbia. To evaluate and assess a data base which will provide insight into the cultural-specific, health-related attitudes, beliefs and practices of the targeted populations. To assess and evaluate educational materials developed for use in a health education program for the targeted populations.

APPROACH:

These objectives will be accomplished through an exploratory descriptive study, within the structure of a two-part, twelve week, health education program, focusing on the identification of significant factors influencing health promotion, disease prevention, and health services access in the targeted populations.

PROGRESS REPORT: 89/01 89/12

The goal of this research is to reduce the level of preventable morbidity and mortality in elderly Black and Hispanic residents of the District of Columbia. The research protocol of this project includes assessments of health-related literacy in the targeted populations followed by tutorial programs to enhance literacy proficiency in this subject area. To date, the principal investigator and research assistants have successfully pretested and completed administration of the Health-Related Literacy Questionnaire to 104 Black and 50 Hispanic members of a randomly selected population of the District of Columbia Senior Citizen Centers. Data entry of the Health-Related Literacy Questionnaire has been completed. Evaluation of the data on the Black population is completed. Evaluation of the data on the Hispanic population has begun. Concurrently, tutors have been provided training in the delivery of information and use of prepared educational materials on disease prevention, health promotion, and accessing health services. Small groups of Black seniors have completed one 15 week tutorial session. Several additional groups of Black and Hispanic seniors are presently involved in the 15 week Health-Related tutorial sessions held in other Senior Centers.

PUBLICATIONS: 00 ADDITIONAL PUBLICATIONS

NO PUBLICATIONS REPORTED THIS PERIOD.

If this information is reproduced, published, or quoted, credit must be given to the project leader and the organization conducting the research. For progress reports, it must be clearly stated that the information reflects only the results obtained during the period specified and final results are subject to completion of the investigation.

AD-487 (11-48)		U.S. DEPARTMENT OF AGRICULTURE COOPERATIVE STATE RESEARCH SERVICE		CRS IS NO. 033720	
RESEARCH WORK UNIT/PROJECT ABSTRACT CURRENT RESEARCH INFORMATION SYSTEM				DATE 06 DEC 1980	
SCIENTIFIC OR OLDER AMERICANS & RELATED RESEARCH				START DATE 01 JUL 1984	
ACCESSION NO. J092484				VERIFICATION DATE 30 JUN 1989	
WORK UNIT/PROJECT NO. GEO01155		REGIONAL PROJECT NO.		CONTRACT/GRANT/AGREEMENT NO.	
LOCATION GEORGIA AGRIC EXPT STATION GRIFFIN GEORGIA		HATCH		AGENCY LIBRY. CSRS GEO	
INVESTIGATIONS RESURRECCION A V A		HEATON E K		NAKAYAMA T	
TITLE CONSUMER CHARACTERISTICS, FOOD-RELATED ATTITUDES AND FOOD BEHAVIOR					
FISCAL YEAR 1989		USDA APPN/ CSRS ADM \$46026		OTHER FEDERAL \$18731	
		NON FEDERAL \$90862		TOTAL \$155619	
				SIS .7	

OBJECTIVES:

To measure the effect of food-related attitudes and other characteristics of consumer groups such as teenagers and the elderly on food purchase behavior; to select specific foods and measure consumer characteristics that influence demand for the food and identify and characterize target market segments for the market development process for the food.

APPROACH:

Food related attitudes, socioeconomic and demographic characteristics, and other factors including shopping and eating habits, and food and nutrition knowledge of consumer groups will be measured. Determinant attributes that help to predict food purchase behavior and use will be identified for each consumer group. Consumer surveys will be conducted on foods selected from such examples as pecans, broccoli, and blueberries in order to characterize consumer demand for the food.

PROGRESS REPORT: 84/06 89/06

Consumer characteristics and food attitudes were measured to explain preference and consumption patterns for fresh and processed vegetables, eggs, peanuts, pecans, frankfurters and beef. Attitudinal variables were found to be useful in the description and quantification of consumer perceptions of food products. Sensory evaluations of food characteristics were used to describe consumer preferences. Multivariate statistical methods were helpful in determining the importance of sensory variables and relationships between these and instrumental measures of quality and/or consumer evaluations of quality, in tomatoes, snap beans, and beef and beef products. In other cases univariate statistical methods were used in the study of peaches and pecans. Factors influencing food patterns and perceptions of persons representing various stages in the lifecycle were determined, particularly pre-school children and their mothers. Mothers characteristics were studied to determine influences on food preferences of children. Differences in eating patterns between low and middle income groups were found. Food related attitudes of women were studied; several differences were found between employed and non-employed women.

PUBLICATIONS: 90 ADDITIONAL PUBLICATIONS

- RESURRECCION, A.V.A., LILLARD, D.A. and WHITE, F.D. 1987. The effect of lipid oxidation/warmed over flavor on consumer acceptance and purchase of pre-cooked ready-to-eat beef products. Final Report, National Live Stock and Meat Board.
- REYNOLDS, A.E. and RESURRECCION, A.V.A. 1988. Nutra-franks consumer study. Final Report, Thomas Packing Co., Griffin, GA. University of Georgia, Food Science and Technology Report No. EFS-M-002. March 17, 1988. 55 pp.
- RESURRECCION, A.V.A. and REYNOLDS, A.E. 1989. The effect of lipid oxidation/warmed-over-flavor on consumer response to stored vacuum packaged precooked beef. Semi-Annual Report to the National Live Stock and Meat Board.
- RESURRECCION, A.V.A. and BLACKBURN, J.B. 1989. Flavor quality of spreadable peanut products as determined by gas chromatography of headspace volatiles and sensory analysis. 86th Annu. Mtg. Sou. Assoc. Agr. Sci. Feb. 5-8, 1989, Nashville.
- REYNOLDS, A.E. and RESURRECCION, A.V.A. 1989. A study using consumer attitudes and perceptions in developing a new product. 86th Annu. Mtg. Sou. Assoc. Agr. Sci. Feb. 5-8, 1989, Nashville, TN. 26:18.
- RESURRECCION, A.V.A. and REYNOLDS, A.E. 1989. Evaluation of natural antioxidants in frankfurters containing chicken and pork. (Abstr.) Annu. Mtg. IFT. 25-29 June, Chicago, IL.
- SHEFFELT, E.L., GARNER, J.C., RESURRECCION A.V.A. and PRUSSIA, S.E. 1989. Consu.

AD-887 (11/88)		U.S. DEPARTMENT OF AGRICULTURE COOPERATIVE STATE RESEARCH SERVICE		CNR ID NO. 131223	
RESEARCH WORK UNIT/PROJECT ABSTRACT CURRENT RESEARCH INFORMATION SYSTEM				DATE 06 DEC 1990	
PPRS-243 OF OLDER AMERICANS & RELATED RESEARCH				START DATE 01 OCT 1985	
ACCESSION NO. 1027548		WORK UNIT/PROJECT NO. IDA00869-B		TERMINATION DATE 10 SEP 1990	
REGIONAL PROJECT NO. W 00153		CONTRACT/GRANT/AGREEMENT NO. HATCH		AGENCY IDENT. CSRS IDA	
LOCATION UNIV OF IDAHO MOSCOW		PERFORMING ORGANIZATION HOME ECONOMICS			
INVESTIGATORS WILLIAMS D K		83843			
TITLE ECONOMIC AND BEHAVIORAL FACTORS ASSOCIATED WITH FOOD SUPPLEMENT USAGE					

FISCAL YEAR	USDA APPN/ CSRS ADM	OTHER FEDERAL	NON FEDERAL	TOTAL	SYS
1989	\$14138	\$0	\$41876	\$56014	.8

OBJECTIVES:

To identify attitudes and economics factors which result in the use of food supplements, and to determine if a relationship exists between health attitudes and intentions and actual vitamin/mineral supplemental behavior.

APPROACH:

Mail questionnaires and telephone interviews will be utilized to identify users and non-users of food supplements. The letters will be mailed with 50% going to households addressed to males and 50% addressed to females. The first, personally addressed mailings will be followed by two reminder mailings. The sample will consist of 1500 random adults. Random telephone interviews at intervals of 9 and 18 months after the initial contact, to generate the desired cyclic indicators and longitudinal data relevant to vitamin/mineral supplement practices will be made. They will collect information on the vitamin/mineral supplement use, demographics, physiological status, income/month, expenditure on food/month, expenditure on supplements/month, alternative purchases, and subjects who use the supplement purchases. The health belief variables will be subjected to multivariate analysis between users and non-users to determine if there are any significant differences in the groups with regard to the attitudes and intentions which relate to vitamin/mineral supplement behaviors.

PROGRESS REPORT: 88/01 88/12

Major accomplishments during 1988 were focused on 1) manuscript development, based on findings from the initial survey results, and dissemination of said manuscripts, 2) continual attention to statistical analysis by New Mexico State University on data collected in 1987. Data from the two phone surveys have been coded, analyzed, and interpretation has begun. Preliminary frequency analyses were reviewed. Merging of the original mail survey data and the two phone surveys to study longitudinal trends also continues. Inordinate amounts of data and the longitudinal nature of the project has created the need for an extension of time for the total project. Draft objectives for the next five year project have been defined and the basic schedule of events outlined. The fact that approximately 40 percent of the sample were regular users of food supplements and another approximate 40 percent were occasional users has important implications for economics, health and/or food service and nutrition professionals. As a generalization, dosage levels are high and similar patterns of purchase and consumption continue. The topic of food supplement use continues to be popular with an increased usage of calcium over the period of the study. Vitamin C was still the most single used vitamin supplement followed by Vitamin E and then Vitamin A.

PUBLICATIONS: 00 ADDITIONAL PUBLICATIONS

WILLIAMS, D., et al. (1988). The Elderly: Their Health Beliefs and the Use of Food Supplements. Proceedings Fifth National Forum on Research in Aging Health, Wellness, and Independence, September. University of Nebraska, Lincoln, Nebraska.

AD-887 (1/88)		U.S. DEPARTMENT OF AGRICULTURE COOPERATIVE STATE RESEARCH SERVICE		CSRS ID NO. 331420	
RESEARCH WORK UNIT/PROJECT ABSTRACT CURRENT RESEARCH INFORMATION SYSTEM				DATE 26 DEC 1990	
PROBLEMS OF OLDER AMERICANS & RELATED RESEARCH				START DATE 01 OCT 1986	
ACCESSION NO. 0132533		WORK UNIT/PROJECT NO. IDA00883		TERMINATION DATE 30 SEP 1991	
REGIONAL PROJECT NO. # 00176		CONTRACT/GRANT/AGREEMENT NO. HATCH		AGENCY IDENT. CSRS IDA	
LOCATION UNIV OF IDAHO MOSCOW		PERFORMING ORGANIZATION IDAHO 83943		SCHOOL OF HOME ECONOMICS	
INVESTIGATORS JUNK V W					
TITLE HOUSING AND LOCATIONAL DECISIONS OF THE MATURING POPULATION: OPPORTUNITIES FOR THE WESTERN REGION					

FISCAL YEAR	USDA APPN/ CSRS ADM	OTHER FEDERAL	NON FEDERAL	TOTAL	SYS
1989	\$11242	\$0	\$16412	\$27654	.0

OBJECTIVES:

Develop a profile of selected aging populations including those who relocate, make seasonal moves, or age-in-place; identify considerations relevant to residential characteristics, support services, and finances important to informed housing decisions; compare rural and urban residents as to their mid- and later-life housing and locational decisions, especially rural directed relocation; and develop decision making criteria and strategies for family mid- and later-life housing and locational choices, and compare the aging population's housing and locational needs and choices and the rural communities' views and policies.

APPROACH:

State will perform all five objectives. Using zip code demography, counties with high portions of the selected populations, 40 years and over, will be identified. A mail questionnaire and census procedures will be used to collect data. To explore the potential for rural revitalization, the congruity between considerations identified by householders and attitudes of community and county governments of the desirability and feasibility of housing an aging population will be tested. Each state will contribute to a regional data base and state and regional analysis. The investigators will work with Cooperative Extension to develop and refine decision strategies for target audiences. The latter will be used to train key community and family decision makers.

PROGRESS REPORT: 88/01 88/12

Data analysis and dissemination was the focus in 1988. Papers were presented at national and regional meetings and campus seminars. This study is unique in that it provides information on the retirement plans of a large (5662) group of pre-retirees (age 40 and older but not yet retired). Results are generalizable to others in this age group with similar education and income and will be particularly useful to community and retirement planners. Major findings include that the self-reported health and income of a person is more likely to be significant in retirement plans and decision making than the age of a person. Most preretirees indicate they want to live in a single family home during retirement and this preference dominates even after the first ten years of retirement. Counties with cities over 150,000 or under 10,000 are least preferred for retirement years. A community with people of all ages is preferred to mostly older or only older people. Medical service and low cost of living are rated as the two most important community characteristics. Pensions and social security are the two primary planned sources of retirement income followed by savings and IRA's with only 1% planning to rely on public assistance.

PUBLICATIONS: 00 ADDITIONAL PUBLICATIONS

JUNK, V.W. and JUNK, W.S. (1988). What are people looking for in a retirement community. Idaho's Economy, 5(4): 12-13.
JUNK, V.W. and DILLMAN, J.J. (1988), October. Retirement community preferences of western preretirees. Proceedings of the American Association of Housing Educators, 237-246.
DILLMAN, J.J. and JUNK, V.W. (1988), October. Pre-retirees preferences for retirement housing. Proceedings of the American Association of Housing Educators, 224-236.
JUNK, V.W. in BRANDT, J. (1988), October. Preferred retirement community characteristics. Proceedings of the American Association of Housing Educators, 90-91.

AD-287 (11-68)		U.S. DEPARTMENT OF AGRICULTURE COOPERATIVE STATE RESEARCH SERVICE		CSRS ID NO. J33320	
RESEARCH WORK UNIT/PROJECT ABSTRACT CURRENT RESEARCH INFORMATION SYSTEM				DATE JUL 1989	
PROBLEMS OF OLDER AMERICANS & RELATED RESEARCH				START DATE 01 FEB 1988	
ACCESSION NO. 0097342				TERMINATION DATE 30 SEP 1989	
WORK UNIT/PROJECT NO. ILLU-01-0350		REGIONAL PROJECT NO.		CONTRACT/GRANT/AGREEMENT NO.	
LOCATION UNIVERSITY OF ILLINOIS URBANA ILLINOIS 61801		HATCH		AGENCY IDENT. CSRS ILLU	
PERFORMING ORGANIZATION AGRICULTURAL EXPER. STATION					
INVESTIGATOR MASSIPP E					
TITLE INTERGENERATIONAL RELATIONSHIPS IN FARM FAMILIES					

FISCAL YEAR	USDA APPN/ CSRS ADM	OTHER FEDERAL	NON FEDERAL	TOTAL	SYS
1989	\$3935	\$0	\$0	\$3935	.0

OBJECTIVES:

To investigate the intergenerational relationship between adult children and the parent generation in farm families. Families where both generations are actively farming will be studied; also farm families where parents are retired but children continue to farm. Investigation of how the current economic situation in agriculture is affecting these families, including conflicts and stress generated, as well as helping patterns between generations and care-giving patterns. How are farm families adjusting to crises? Investigate how farm families deal with aging parents.

APPROACH:

Two samples will be selected; farm families where both generations are farming; and families where parents are retired and children continue to farm. Subjects will be interviewed face-to-face, using structured instruments, with selected open-ended questions. Some case histories will be taken. Interviews will be held separately with mother, father, son/daughter and spouse of child. Gleie's scheme for classification of family functions will be incorporated (nurturance; economic aspects and division of labor; residential functions such as housing and community; and legal and cultural functions, including transmission of traditions and material property). Bengsten and Schrader's scale of intergenerational interaction will be incorporated in the instrument. Data will be analyzed using appropriate statistical procedures.

PROGRESS REPORT: 86/02 89/09

This project was an exploratory study of intergenerational parent/child relationships in farm families, where at least one middle-aged offspring was also farming. A major focus was helping pattern across generations. Extensive separate interviews were conducted with each generation in 104 central and western Illinois farm families. The sample included two sub-groups: successful farm operations (as judged by FBM managers) and families experiencing economic hardship. Results indicate that these farm families express a high degree of solidarity, closeness, and support across generations. Parent/child relationships were particularly strong as indicated by helping patterns, although parents did not feel closer to children who were also farming compared to those not farming. Financially successful families were more likely to be willing to consider utilizing help from outside the family (community resources) than stressed families. Level of education correlated negatively with retirement planning. Financially successful farmers were less likely to rely on Extension information from the county officer.

PUBLICATIONS: 00 ADDITIONAL PUBLICATIONS

NO PUBLICATIONS REPORTED THIS PERIOD.

AD-887 (11-88)		U.S. DEPARTMENT OF AGRICULTURE COOPERATIVE STATE RESEARCH SERVICE		CRS ID NO. 731920	
RESEARCH WORK UNIT/PROJECT ABSTRACT CURRENT RESEARCH INFORMATION SYSTEM				DATE 06 DEC 1990	
PROBLEMS OF OLDER AMERICANS & RELATED RESEARCH				START DATE 01 OCT 1983	
ACCESSION NO. 0091534		WORK UNIT/PROJECT NO. R100070		TERMINATION DATE 30 SEP 1989	
REGIONAL PROJECT NO. NE 00147		CONTRACT/GRANT/AGREEMENT NO. HATCH		AGENCY SERT. CSRS RI.	
LOCATION UNIV OF RHODE ISLAND KINGSTON		RHODE ISLAND 02881		PERFORMING ORGANIZATION FOOD SCIENCE & TECHN NUTRITION & DIETETICS	
INVESTIGATOR PSHLEMAN, J.		ENGLISH, C.		PSHLEMAN, J.	
TITLE IMPROVING SENSITIVITY OF METHODS TO ASSESS NUTRIENT INTAKE AND TO PREDICT NUTRITIONAL RISK					
FISCAL YEAR 1989		USDA APPN/ CSRS ADM \$17919		OTHER FEDERAL \$0	
		NON FEDERAL \$12945		TOTAL \$30864	
				SYS .5	

OBJECTIVES:

To determine practical, reliable, and cost effective methods of obtaining and evaluating dietary data. To improve the predictability of nutritional risk.

APPROACH:

Dietetics and nutrition majors will estimate the amount of liquid in glasses of assorted sizes, shapes, degree of transparency and thickness of walls furnished by the region. Glasses will be filled to standardized level with colored fluids and fluids of varying consistency. A food frequency instrument developed by the region will be administered to 50 volunteers of a health club. Dietary iron status and biochemical measurements of iron will be examined on this group as will the relationship between dietary intake and anthropometric measurements.

PROGRESS REPORT: 88/10 89/09

37 dietary records were coded and showed high variability for thiamin, Vit.C, Fe and PUFA. 100 students estimated amounts of cola and water in glasses of various shapes and sizes; 85 students and 35 congregate meal site participants estimated portion size of 16 food items. 35 students determined whether a (HHHQ) portion sizes/size stated is as effective in estimating dietary intake. A pilot study determined whether women change their eating behavior as a result of health seminars for the elderly. Changes such as reduced caloric and fat intake without decreased intake of other nutrients occurred. INQ for 12 housebound elderly subjects was below standard for protein and Fe. Block instrument was a valid tool to use for this group. 73 students analyzed 3-day diet records using Nutrient 3, N.P. 200, Dietwise & HHHQ. Sig. differences in nutrient intake were found between the HHHQ analysis and the other computer programs. 63 volunteer subjects (65-97 yrs) from meal sites in RI participated in HHHQ dietary intake analysis. Diets were analyzed for nutrient density of Ca, Fe, Vit.A., Vit.C., and B1. Health locus control was determined. T-tests & multiple regression analysis (p<.05) were performed to compare age groups, education, health locus control, meal site participation and nutrient densities. While T-tests showed no differences, regression analysis indicated age had a significant effect on Ca. Overall nutrient density was high, but Ca intake inadequacies and decreased energy intake may be a problem.

PUBLICATIONS: 00 ADDITIONAL PUBLICATIONS

NO PUBLICATIONS REPORTED THIS PERIOD.

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AD-387 (11/82)		U.S. DEPARTMENT OF AGRICULTURE COOPERATIVE STATE RESEARCH SERVICE		CRS ID NO 111227	
RESEARCH WORK UNIT/PROJECT ABSTRACT CURRENT RESEARCH INFORMATION SYSTEM				DATE 14 DEC 1990	
PROBLEMS OF OLDER AMERICANS & RELATED RESEARCH				START DATE 01 OCT 1986	TERMINATION DATE 30 SEP 1991
ACCESSION NO. 0092937	WORK UNIT/PROJECT NO. UTAO0265	REGIONAL PROJECT NO. W 00176	CONTRACT/GRANT/AGREEMENT NO. HATCH		AGENCY IDENT. CSRS UTA
LOCATION UTAH STATE UNIVERSITY LOGAN UTAH		84322	PERFORMING ORGANIZATION HOME ECONOMICS & CONSUMER EDUC		
INVESTIGATOR MCADDEN J R					
TITLE HOUSING AND LOCATIONAL DECISIONS OF THE MATURING POPULATION: OPPORTUNITIES FOR THE WESTERN REGION					

FISCAL YEAR	USDA APPN/ CSRS ADM	OTHER FEDERAL	NON FEDERAL	TOTAL	SYS
1989	\$12998	\$0	\$11112	\$24110	.2

OBJECTIVES:

Develop a profile of selected aging populations including those who relocate, make seasonal moves, or age-in-place. Identify considerations relevant to residential characteristics, support services, and finances important to informed housing decisions. Compare rural and urban residents as to their aid and later life housing and locational decisions, especially rural directed relocation. Develop strategies and models for family aid and later life housing and locational decisions, and compare aging population's housing and locational needs and choices and the rural communities' views and policies.

APPROACH:

A common mail questionnaire will be utilized by all participating states to acquire the information needed. Census data will be utilized to provide weighting factors for different strata and states.

PROGRESS REPORT: 89/01 89/12

W-176 is on target at the present time. Dissemination of the major implications that were drawn from the first wave of data were made via presentations at the Extension Winter School in Tucson, AZ (part of the objective 5), Jan. 89. Scientists identified their interests and agreed on areas of the data they would analyze and publish to meet the first three objectives of the study at the W-176 Technical Committee meeting, January 25-27, 1989. The October 5-6, 1989, W-176 Technical Committee meeting was held in Denver, CO. Plans for continued analyses of data from wave one to meet the final four objectives were made and plans for gathering the next wave of data were developed. UT, OR, ID, and HI (new member) will gather data Spring 1989, from a random sample within each state. Minor revisions are being made to the instrument an identical instrument will be used by all states gathering data. Negotiations with a survey research institute to draw the sample, with University of Idaho to print the instrument, and with Washington State University to enter the data are underway. Instruments are to be mailed February 1, 1989. Data are to be to Washington State from each of the four states by May 1, 1989. The next W-176 Technical Committee meeting is scheduled for November 1-2, 1990, Salt Lake City, UT. The meeting will begin at 8:30 a.m. on the 1st and conclude at 4:00 p.m. on the 2nd.

PUBLICATIONS:

00 ADDITIONAL PUBLICATIONS

MCADDEN, J.R., BRANDT, J.A., & TRIPPLE, P.A. 1989. Housing for Disabled Persons: To what extent will today's homes accommodate a wheelchair. AAHE refereed conference papers. Texas A&M University, College Station, TX.
MCADDEN, J.R. and MAKELA, C.L.J. 1989. Financing Retirement: Rural and Urban Preferences. Working with Families Conference Proceedings. Kansas State University, Manhattan, Kansas. p 24.
MCADDEN, J.R. and MAKELA, C.J. 1989. Housing and Community Retirement Preferences: Are they related to financial resources. Housing and Society (accepted).

AD-387 (11/82)		U.S. DEPARTMENT OF AGRICULTURE COOPERATIVE STATE RESEARCH SERVICE		CRIS ID NO J33227	
RESEARCH WORK UNIT/PROJECT ABSTRACT CURRENT RESEARCH INFORMATION SYSTEM				DATE 16 DEC 1989	
PROBLEMS OF OLDER AMERICANS & RELATED RESEARCH				START DATE 31 JUL 1986	
TERMINATION DATE 30 JUN 1989					
ADDITIONAL NO. 0779132	WORK UNIT/PROJECT NO. UTA00837	REGIONAL PROJECT NO.	CONTRACT/GRANT/AGREEMENT NO. HATCH	AGENCY IDENT. CSAS UTA	
LOCATION UTAH STATE UNIVERSITY LOGAN UTAH			PERFORMING ORGANIZATION SOCIOLOGY, SOC WORK & ANTHROP		
INVESTIGATORS KIM Y					
TITLE CHANGES IN POPULATION SIZE AND CHARACTERISTICS AND COMMUNITY DEVELOPMENT IN UTAH, 1950 TO 2010					

FISCAL YEAR	USDA APPN/ CSRS ADM	OTHER FEDERAL	NON FEDERAL	TOTAL	SYS
1989	\$17844	\$0	\$22917	\$40761	.0

OBJECTIVES:

To study trend of population growth and changes in population composition in Utah from 1950 to 2010, with particular reference to planning district, county and sub-county level. The project will first focus on the analysis of demographic changes during the 25 year period between 1950 and 1985 and an attempt will be made to project population for the next 25 year period from 1985 to 2010. The components of population growth and change, i.e., fertility, marriage and divorce, mortality and morbidity and migration will be analyzed.

APPROACH:

The study is primarily based on existing data such as decennial census data, including the 1980 census data, vital registration data and records of various private and public agencies. Additional data required will be collected through sample surveys. Detailed population projections will be prepared for 1985 to 2010 for every five-year period by subunits such as planning district and county based on the findings from the analysis of the data for 1950 to 1985. The method utilized will be primarily demographic.

PROGRESS REPORT: 79/07 89/06

This research project focused on major changes in population size, distribution and composition and the underlying processes of mortality, fertility and migration in Utah. A combination of census, vital registration and survey data were employed. Important demographic changes in the post-1980 period were uncovered. Utah's nonmetropolitan population revival of the 1970's, as occurred nationally and regionally, had run its course. These were diminished population growth rates and fewer counties growing. The middle period of the 1980's was worse than the early 1980's. Nonetheless, population retrenchment was not as severe as before the 1970's turnaround. County net migration loss occurred across a wide range of economic bases. Many turnaround counties were faced with the prospect of planning under conditions of population decline after planning for unparalleled growth. Immigration of racial and ethnic minority groups has contributed to an increasing diversity of Utah's population. This should translate into an increasing diversity in resources, needs and demands. For example, new migrants arriving in Utah exhibit different attitudes on public policy issues, largely because of differences from natives in background characteristics. A combination of increasing life expectancy and net elderly immigration has substantially and rapidly increased the number of elderly.

PUBLICATIONS: 00 ADDITIONAL PUBLICATIONS

- KIM, Y., WILSON, M., CHISA, S., GREENWOOD, C. and ALLMAN, S. 1987. An Assessment of Social Service Needs of the Elderly in Northern Utah, Utah Agr. Expt. Sta., USU, Logan, UT. Res. Rpt. 119. June.
- KIM, Y. and BYUN, Y. Aging and Generational Relations: Elderly in Rural Utah. In: Changing Family Structure and Population Aging in China and Selected Western Countries (in press).
- KIM, Y. and KIM, I. 1986. A Survey on Needs for Public Transportation Services in Cache County, Utah. Report submitted to the Cache County Commission.
- KIM, Y. and WILSON, M. 1987. Growing Old in Northern Utah. Utah Science, Fall. 48 (3):114-116.
- RHEA, V., STINNER, W.F. and TONEY, M.B. 1988. Poverty and migration among nonmetropolitan young adults: Race and gender differences. Annual Meeting, Rural Sociological Soc., Athens, GA.
- STINNER, W.F. 1988. Final report - Census of Woodruff Elementary School Attendance Area. Submitted to the Logan School District (Unpublished).
- STINNER, W.F. 1988. Characteristics of Households in the Woodruff Elementary School Attendance Area: A Descriptive Summary. Submitted to the Logan School District (unpublished).

AD-387 (11/88)		U.S. DEPARTMENT OF AGRICULTURE COOPERATIVE STATE RESEARCH SERVICE		CWS ID NO. J33922	
RESEARCH WORK UNIT/PROJECT ABSTRACT CURRENT RESEARCH INFORMATION SYSTEM				DATE 06 DEC 1990	
PROBLEMS OF OLDER AMERICANS & RELATED RESEARCH				START DATE 01 OCT 1986	
ACCESSION NO. 0093915	WORK UNIT/PROJECT NO. VA-135211	REGIONAL PROJECT NO.	CONTRACT/GRANT/AGREEMENT NO.	TERMINATION DATE 30 SEP 1991	
LOCATION VIRGINIA POLYTECHNIC INSTITUTE BLACKSBURG VIRGINIA		24061	HATCH PERFORMING ORGANIZATION HUMAN NUTRITION & FOODS CSRS VA.		
INVESTIGATOR BITTNEY S J					
TITLE PROTEIN AND AMINO ACID NEEDS DURING AGING					

FISCAL YEAR	USDA APPN/ CSRS ADM	OTHER FEDERAL	NON FEDERAL	TOTAL	SYS
1989	\$34208	\$1505	\$69236	\$104949	.0

OBJECTIVES:

To determine the effects of aging on the maintenance requirements for protein in rats. To evaluate an animal model for studies on amino acid requirements as affected by aging.

APPROACH:

Maintenance requirements for protein and selected essential amino acids will be determined using rats varying in age from maturity to old age. Dietary variables will include level of protein, level of a single amino acid as well as age. Assessment parameters will include tissue protein, serum protein and serum concentration of the amino acid being studied.

PROGRESS REPORT: 88/01 89/09

Experiments were continued to examine the need for lysine by the mature rat. A purified amino acid mixture that simulated casein plus methionine without lysine was fed to 18-month old female rats. Lysine was added in increments so that diets ranged from zero to 0.24 percent. Diets containing 4 percent protein as casein supported body weight and carcass nitrogen. Diets with various levels of lysine, including the treatment that simulated casein, did not maintain body weight or carcass nitrogen at the same level as intact casein. However, a lysine level of 0.16 percent was equivalent to the amino mixture simulating intact casein. These data compare to previous experiments.

PUBLICATIONS: 00 ADDITIONAL PUBLICATIONS

NO PUBLICATIONS REPORTED THIS PERIOD.

AD-387 (11/88)		U.S. DEPARTMENT OF AGRICULTURE COOPERATIVE STATE RESEARCH SERVICE		CWS ID NO. J33922	
RESEARCH WORK UNIT/PROJECT ABSTRACT CURRENT RESEARCH INFORMATION SYSTEM				DATE 06 DEC 1990	
PROBLEMS OF OLDER AMERICANS & RELATED RESEARCH				START DATE 01 OCT 1986	
ACCESSION NO. 0073044	WORK UNIT/PROJECT NO. CA-D*-ABS-3644-H	REGIONAL PROJECT NO.	CONTRACT/GRANT/AGREEMENT NO.	TERMINATION DATE 30 SEP 1991	
LOCATION UNIV OF CALIFORNIA DAVIS CALIFORNIA		95616	HATCH PERFORMING ORGANIZATION APPLIED BEHAVIORAL SCIENCE CSRS CALB		
INVESTIGATOR PRITSUK Y					
TITLE LIFE SATISFACTION, HEALTH RECORDS & SOCIAL PARTICIPATION AMONG SEVERAL POPULATIONS AT RISK					

FISCAL YEAR	USDA APPN/ CSRS ADM	OTHER FEDERAL	NON FEDERAL	TOTAL	SYS
1989	\$2500	\$0	\$47080	\$49580	.2

OBJECTIVES:

Complete write-up and publish findings from studies of elderly networks, and medical care utilization; Assess self-help and agency resources available to specific at-risk samples.

APPROACH:

Focus upon library work, assessment of projects associated with the Calif. State Dept. of Health, Mental Health Promotion Branch, & Agency Survey, all linked to documentation of needs of at-risk populations and to gaps in natural helping and agency services.

PROGRESS REPORT: 89/01 89/12

During the past year the project has obtained data from 175 adult caregivers of parents with Alzheimer's disease. The data show six factors characterizing accommodations to caregiver burden. Most accommodations were negative and indicate the stress of caregiving and the need for greater support. One paper is being resubmitted for publication. It shows the interactive effects of stressful life events, social networks and the sense of control upon two indicators of health status in an elderly sample.

PUBLICATIONS: 00 ADDITIONAL PUBLICATIONS

NO PUBLICATIONS REPORTED THIS PERIOD.

AD-87 (11-88)		U.S. DEPARTMENT OF AGRICULTURE COOPERATIVE STATE RESEARCH SERVICE		CNSG NO. 011220	
RESEARCH WORK UNIT/PROJECT ABSTRACT CURRENT RESEARCH INFORMATION SYSTEM				DATE 26 DEC 1990	
PROBLEMS OF OLDER AMERICANS & RELATED RESEARCH				VEGETATION DATE 10 SEP 1992	
ADDITIONAL NO.	WORK UNIT/PROJECT NO.	REGIONAL PROJECT NO.	CONTRACT/GRANT/AGREEMENT NO.	AGENCY IDENTITY	
7132203	VA-135213			CSRS VA.	
LOCATION VIRGINIA POLYTECHNIC INSTITUTE BLACKSBURG VIRGINIA 24061			HATCH PERFORMING ORGANIZATION HUMAN NUTRITION & FOODS		
PI/ATT C. A.			RITCHIEY S. J.		
EFFECTS OF AGING EXERCISE & IRON NUTRITION ON IRON & HEMATOLOGICAL PARAMETERS					

FISCAL YEAR	USDA APPN/ CSRS ADM	OTHER FEDERAL	NON FEDERAL	TOTAL	SYS
1989	\$19	\$110	\$7433	\$7562	.0

OBJECTIVES:

To determine the effects of aging, exercise and iron nutrition on tissue iron, serum ferritin, serum iron and total iron binding capacity (TIBC) in the female rat; to determine the effects of exercise and iron nutrition on serum ferritin, serum iron and TIBC levels in the elderly human females.

APPROACH:

Rats ranging in size from 12 to 26 months of age will be provided two levels of iron and either exercised or remain sedentary. Exercise will be swimming for a 6-week period. Iron will be measured by atomic absorption in heart, liver, spleen and muscle. Serum iron, TIBC and serum ferritin will be measured.

PROGRESS REPORT: 88/01 89/09

The effect of moderate exercise on iron status was investigated in 56- to 65-year-old women. Twenty women were randomly assigned to two groups of 10: exercise or no exercise groups. Women in the exercise group exercised on a stationary bicycle, three days per week, 30 minutes/session, at 70%-75% of maximal heart rate for 11 weeks. At weeks 0 and 12, treadmill submax stress tests were obtained to determine cardiovascular fitness. Venous blood samples obtained at weeks 0 and 12 were used for hemoglobin, hematocrit, serum iron, total iron binding capacity, transferrin saturation and ferritin determinations. Using paired t-tests the data indicated significant increases in time to reach 70% maximum heart rate and in hemoglobin concentration in the exercise group at 12 weeks. No significant differences were found in other hematological parameters. Vitamin C intake was significantly higher in the exercise group at week 12. Two-sample t-tests indicated no significant differences in nutrient intakes between the groups at weeks 0 and 12. The results suggest that moderate exercise does not compromise iron status in 56- to 65-year-old women.

PUBLICATIONS: 00 ADDITIONAL PUBLICATIONS

PRATT, C.A., PRASAD, M.S., AND REYNOLDS, L.K., 1989, The effects of exercise and dietary iron on iron status in 12-month old female rats., The FASEB Journal, Volume 3, Number 4, page A1076, Abstract #4936 N.S. Thesis.

If this information is reproduced, published, or quoted, credit must be given to the project leader and the organization conducting the research. For progress reports, it must be clearly stated that the information reflects only the results obtained during the period specified and final results are subject to completion of the investigation.

NO-587 (11-88)		U.S. DEPARTMENT OF AGRICULTURE COOPERATIVE STATE RESEARCH SERVICE		CRIS ID NO.	
RESEARCH WORK UNIT/PROJECT ABSTRACT		CURRENT RESEARCH INFORMATION SYSTEM		DATE	
PROBLEMS OF OLDER AMERICANS & RELATED RESEARCH		START DATE		TERMINATION DATE	
2136441		01 JAN 1989		11 DEC 1991	
ADDITIONAL NO.	WORK UNIT/PROJECT NO.	REGIONAL PROJECT NO.	CONTRACT/GRANT/AGREEMENT NO.	AGENCY ABBREV.	
2136441	VA-135266		HATCH	CSRS VA.	
LOCATION			PERFORMING ORGANIZATION		
VIRGINIA POLYTECHNIC INSTITUTE BLACKSBURG VIRGINIA 24061			CENTER FOR GERONTOLOGY		
INVESTIGATOR					
MCANLEY A J					
TITLE					
COMMONWEALTH AGING POLICY AND PRACTICE SURVEY					

FISCAL YEAR	USDA APPN/ CSRS ADM	OTHER FEDERAL	NON FEDERAL	TOTAL	SYS
1989	\$1769	\$381	\$22436	\$24586	.0

OBJECTIVES:

Plan and complete a series of statewide surveys addressing aging policy and practice issues; organize surveys so they have the greatest potential for assisting planners and policy makers involved in aging; encourage extensive use of the survey for contribution to knowledge.

APPROACH:

Three statewide telephone surveys will be conducted to obtain information on issues important to policy and practice in aging. An Advisory Panel will be utilized to construct the focus of each survey. Sampling techniques and unique research designs will be utilized to fit each survey. Information will be used to prepare research papers and provide guidance to policy makers.

PROGRESS REPORT: 88/91 89/09

The Advisory Council for the project has been chosen. It is comprised of individuals representing staff of major state agencies serving older people (Department for the Aging, Department of Social Services, Department of Medical Assistance Services, Office of the Secretary of Health and Human Services, Insurance Bureau, Appropriations Committee) as well as representatives from private sector enterprises (Virginia Health Care Association, Virginia Association of Nonprofit Homes for the Aging, Blue Cross and Blue Shield of Virginia, Virginia Hospital Association) and older consumers. The tentative topic for the first survey is long-term care insurance. The Joint Appropriations Committee has tentatively committed funds to expand the initial survey, but will not be able to make any final decision until early 1990. Therefore, it is anticipated that the initial survey, which will be based on the telephone format, will be undertaken during Spring, 1990. In the meantime, an initial set of research topics related to long-term care insurance has been submitted to the Advisory Council, and their responses have been received. Research topics include attitudes about long-term care insurance, income/asset information, personal experience with/knowledge of long-term care, expectations of future needs for long-term care, and background variables.

PUBLICATIONS: 00 ADDITIONAL PUBLICATIONS

NO PUBLICATIONS REPORTED THIS PERIOD.

If this information is reproduced, published, or quoted, credit must be given to the project leader and the organization conducting the research. For progress reports, it must be clearly stated that the information reflects only the results obtained during the period specified and final results are subject to completion of the investigation.

AD-607 (11-86)		U.S. DEPARTMENT OF AGRICULTURE COOPERATIVE STATE RESEARCH SERVICE		CNS 2 NO.	
RESEARCH WORK UNIT/PROJECT ABSTRACT CURRENT RESEARCH INFORMATION SYSTEM				DATE 11/17/90	
PROBLEMS OF OLDER AMERICANS & RELATED RESEARCH				START DATE 01 OCT 1989	
ADDITIONAL NO.		WORK UNIT/PROJECT NO.		TERMINATION DATE 30 SEP 1993	
0084513		4IS02623		AGENCY BRN.	
REGIONAL PROJECT NO.		CONTRACT/GRANT/AGREEMENT NO.		CSRS WIS	
LOCATION UNIV OF WISCONSIN MADISON WISCONSIN		HATCH 53706		PERFORMING ORGANIZATION NUTRITIONAL SCIENCES	
INVESTIGATOR GREGER, J.L.					

FACTORS WHICH AFFECT MINERAL BIOAVAILABILITY

FISCAL YEAR	USDA APPN/ CSRS ADM	OTHER FEDERAL	NON FEDERAL	TOTAL	SYS
1989	\$19781	\$0	\$113692	\$133473	.3

OBJECTIVES:

To examine short and long term consequences of variations in dietary levels of protein, phosphorus, sulfate, sodium and chloride (all components of "high-protein" foods) on calcium, zinc, magnesium and aluminum utilization. To investigate whether physiological responses adjust over time to these dietary alterations.

APPROACH:

A series of rat feeding studies will be conducted to assess the effects of variations for dietary levels of protein, sulfate, phosphorus, sodium and chloride (individually and in combination) on absorption, urinary excretion and tissue retention of minerals. Short and long term physiological adaptations, in terms of endogenous gut secretions, kidney function, acid-base balance, to the dietary alterations will be assessed.

PROGRESS REPORT: 89/01 89/12

A variety of factors affecting mineral utilization were studied in 1989. Only major results are mentioned. Rats fed lactose-hydrolyzed milk rather than untreated milk absorbed total Ca and Ca-45 more efficiently but lost more Ca in urine so that bone retention of Ca was not improved. However, lactose increased retention of Mg and Zn in bone of young and mature rats. Ingestion of 10% versus 2.5% butterfat had no effect on apparent absorption of calcium among young rats (2 months) but tended to decrease Ca absorption in mature (8 months old) rats. This weak effect reflected the small amount of Ca (<2% of fecal Ca) associated with lipid in feces. The anemia induced in chicks by feeding excess Zn is not a hemolytic anemia, as in vivo lifespan of red blood cells (RBC's) and t(1/2) of Fe-59 in RBC's is not reduced. Ingestion of supplemental Cu did not reverse effect of zinc on hematocrit. Normally-growing rats with a 26% reduction in kidney function as judged by creatinine clearance and blood urea nitrogen retained more aluminum in bone. Partially supported by NIH Grant ST32CA09151, Wisconsin Milk Marketing Board, UW Graduate School, Food Research Institute, UW Center for Dairy Research.

PUBLICATIONS: 00 ADDITIONAL PUBLICATIONS

LEWIS, W.M., YARCUS, M.S.K., BEHLING, A.E. and GREGER, J.L. 1989. Calcium supplements and milk: Effects on acid-base balance and on retention of calcium, magnesium and phosphorus. *Am. J. Clin. Nutr.* 49:527-533.
STAHL, J.L., GREGER, J.L. and COOK, R.E. 1989. Zinc, copper and iron utilization by chicks fed various levels of zinc. *Br. J. Poultry Sci.* 30:123-134.
GREGER, J.L. 1989. Effect of dietary protein and minerals on calcium and zinc utilization. *Crit. Rev. Food & Nutr.* 28:249-271.
GREGER, J.L. Potential for trace mineral deficiencies and toxicities in the elderly. In: Bales, C.W., ed. *Mineral Homeostasis in the Elderly*. New York, NY: Alan R. Liss, 1989:171-199.
GREGER, J.L., GUTKOWSKI, C.M. and KHAZEN, R.B. 1989. Interactions of lactose with calcium, magnesium and zinc in rats. *J. Nutr.* (In press).
BEHLING, A.E. and GREGER, J.L. 1989. The importance of lactose in yogurt for mineral utilization. *J. Agric. Food Chem.* (In press).
STAHL, J.L., COOK, R.E., SUNDE, M.L. and GREGER, J.L. 1989. Enhanced humoral immunity in progeny chicks from hens fed practical diets supplemented with zinc. *Applied Agric. Res.* 4:86-89.

U.S. DEPARTMENT OF AGRICULTURE COOPERATIVE STATE RESEARCH SERVICE		CRS ID NO. J31123
RESEARCH WORK UNIT/PROJECT ABSTRACT CURRENT RESEARCH INFORMATION SYSTEM		DATE 16 DEC 1990
PROBLEMS OF OLDER AMERICANS & RELATED RESEARCH		START DATE 01 OCT 1987
ACCESSION NO. 0133023	WORK UNIT/PROJECT NO. WIS03182	TERMINATION DATE 30 SEP 1989
REGIONAL PROJECT NO.	CONTRACT/GRANT/AGREEMENT NO. HATCH	PROJECT BUDGET CSRS WIS
LOCATION UNIV OF WISCONSIN MADISON WISCONSIN 53706	PERFORMING ORGANIZATION FAMILY RESOURCE & CONSUMER SCI	
INVESTIGATOR DOHR, J. A.		
TITLE RURAL ELDERLY: DESIGN ARTS PROGRAM PARTICIPATION, THOUGHT STRUCTURING AND CREATIVE INTEREST		

FISCAL YEAR	USDA APPN/ CSRS ADM	OTHER FEDERAL	NCM FEDERAL	TOTAL	SYS
1989	\$2559	\$0	\$0	\$2559	.1

OBJECTIVES:

The long range, general purpose of the research is to examine and expand understanding of participation of rural adults, 60 years or older, in arts and design programs related to thought structure and creative interest. SPECIFIC OBJECTIVES ARE: To identify levels of global thought structuring in participants in creative arts and design programs and in non-arts senior programs. To identify content specific thought structure of participant in creative arts and design programs. To determine if and when thought structure changes might occur with participation in art and design programs. To evaluate data collection methods of intensive interview for the MID (global) measure, and written essay format for the HOD (design) measure.

APPROACH:

Rural adults over 60 years of age, residing in southwestern Wisconsin counties and participating in either creative arts or non-arts programs will be sampled.

A sample of 120 individuals will be selected, and interviewed. Three instruments will be used to collect data: creative lifetime interest graph; measure of global Intellectual Development (MID, Perry 1970, 1981) and Measure on Design thought development. Pattern matching, log linear, a nova and correlation statistics will be used for analyzing data.

PROGRESS REPORT: 87/10 89/09

This study continued examination of program participation and creative interest of rural elderly, initiated in Hatch 2787 study. It tested previous findings of three patterns of creative activity over the life span and mature creativeness scales. It further examined the relationship of participation and health (Zung Measure and Self-Report), and creative personality scores (Word Inventory) with design thought structuring (Measure of Design). Older adults (N=68) involved in senior site creative arts and non-arts programs participated in the study; 52 females and 16 males. Their ages ranged from 55-90 years with the mode group 71-75. A normal distribution of age was found for participation in this sample. Results replicate previous findings on life-span types of consistent, up early- up late, and rising. Differences found on the MI evidence that design arts program participants scored higher on mature creative and creative constant subscales, again supporting previous results. No significant differences were observed on type of program participation and health, as measured by Zung. Self-reporting data on health ranged from excellent to poor. Qualitative remarks indicated that respondents perceive activity in general to be related to health, not type. However, creative subscale scores on the MI and health measures may be related. Continued analysis is in progress. Design thought structuring, as interpreted as dualistic, multiplistic, and relativism with commitment, were related.

PUBLICATIONS: 00 ADDITIONAL PUBLICATIONS

DOHR, J. (in press) Mature Creativeness: A Differentiation Factor in Adult Development. Creative Child and Adult Quarterly.
DOHR, J. and PORTILLO, M. 1990. Creative Behavior and Education: An Avenue for Life-Span Development. In Sherron, R & Lumsden, D. (eds). Introduction to Education Gerontology, NY: Hemisphere Publishing, 201-226.
DOHR, J. and PORTILLO, M. 1989. Creative Life Series: Design Arts Patterns for Successful Aging. Madison, Wis: Beckner Endowment/Family Resources and Consumer Sciences.
DOHR, J. and SCOTT, S. (in progress) PERSPECTIVE FOR BASIC DESIGN. Dubuque, IA: Wm. C. Brown Publications.

AG-802 (1/68)		U.S. DEPARTMENT OF AGRICULTURE COOPERATIVE STATE RESEARCH SERVICE		CSRS ID NO. J4442J	
RESEARCH WORK UNIT/PROJECT ABSTRACT CURRENT RESEARCH INFORMATION SYSTEM				DATE J6 DEC 1990	
PEOPLE4S OF OLDER AMERICANS & RELATED RESEARCH				START DATE 01 JUL 1989	
ACCESSION NO. 0137673	WORK UNIT/PROJECT NO. WIS03281	REGIONAL PROJECT NO.	CONTRACT/GRANT/AGREEMENT NO.	TERMINATION DATE 30 SEP 1991	AGENCY BRCH.
LOCATION UNIV OF WISCONSIN MADISON		53706	RESPONDING ORGANIZATION HATCH AGRICULTURAL JOURNALISM CSRS WIS		
INVESTIGATORS O'KEEFE G J		RURULL J			
TITLE THE USES OF MASS MEDIA BY THE RURAL ELDERLY					

FISCAL YEAR	USDA APPN/ CSRS ADM	OTHER FEDERAL	NON FEDERAL	TOTAL	SYS
1989	\$7522	\$0	\$70165	\$77687	.4

OBJECTIVES:

The proposed study will examine media uses and related characteristics of the rural elderly, in order to determine whether their communication patterns are distinctive from those of other groups. The guiding hypothesis is that rural elderly are likely to vary in their media uses as a function of such characteristics as demographics, social and psychological factors, and their reasons for using media. Also examined will be the information environment and needs of Wisconsin rural elderly.

APPROACH:

The methods will entail secondary analysis of a national probability sample survey of elderly persons, as well as a field case study of Wisconsin information resources available to the rural elderly.

PROGRESS REPORT: 89/07 89/12

The project examines media uses and related characteristics of rural elderly persons in order to determine how their communication patterns compare to those of other groups. The guiding hypothesis is that rural elderly are likely to vary in their media uses as functions of such characteristics as demographics, social and psychological factors, and their reasons for using media. Also examined are the information environments and needs of Wisconsin rural elderly. The approach involves a secondary analysis of a national probability sample of 1,300 elderly persons, as well as a field case study of Wisconsin information resources available to the rural elderly. Preliminary findings corroborate previously hypothesized demographic and sociographic similarities and differences between rural and urban elderly. However, little variation in newspaper and television exposure patterns was found as a function of community size although some significant differences appeared in reasons given for using each medium. Despite those, there is no indication that rural elderly -- in either small towns or open country -- use mass media for informational purposes any less than do their urban counterparts.

PUBLICATIONS: 00 ADDITIONAL PUBLICATIONS

NO PUBLICATIONS REPORTED THIS PERIOD.

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AD-507 (11-88)		U.S. DEPARTMENT OF AGRICULTURE COOPERATIVE STATE RESEARCH SERVICE		CRS ID NO. 33322	
RESEARCH WORK UNIT/PROJECT ABSTRACT CURRENT RESEARCH INFORMATION SYSTEM				DATE 06 DEC 1990	
PROBLEMS OF OLDER AMERICANS & RELATED RESEARCH				START DATE 01 OCT 1937	
ACCESSION NO. 0771637		WORK UNIT/PROJECT NO. JNP00354		REGIONAL PROJECT NO. A 00118	
CONTRACT/GRANT/AGREEMENT NO. HATCH		TERMINATION DATE 30 SEP 1992		AGENCY IDENT. CSRS WM.P	
LOCATION WASHINGTON STATE UNIVERSITY PULLMAN		PERFORMING ORGANIZATION RURAL SOCIOLOGY		99164	
INVESTIGATORS WARDWELL, J. J.		COOK, A. K.			
TITLE IMPACTS OF HUMAN MIGRATION FLOWS ON NONMETROPOLITAN PEOPLE AND PLACES					

FISCAL YEAR	USDA APPN/ CSRS ADM	OTHER FEDERAL	NON FEDERAL	TOTAL	SYS
1989	\$34267	\$0	\$28268	\$62535	.7

OBJECTIVES:

To describe and explain population changes involving rural and nonmetropolitan areas through the mechanisms of changes in migration, mortality and fertility. To refine further the decision models of migrants and potential migrations to, from, and within the West. To analyze the interdependencies of agricultural and natural resource production, food and fiber employment, and population change.

APPROACH:

Use of county, state and regional data collected by USDA & Census to monitor trends in population change by types of counties; analyze impacts of economic recession on decreased immigration and increased migration out of counties; apply models of changes in population composition to explain variations in birth and death rates; pool previously collected survey data sets from metropolitan and nonmetropolitan areas of the Northwest to monitor changes in residential preferences and reasons for moving; compare industry-specific recession impacts on economic and population growth in high and low amenities counties; develop a framework of structural relationships between population changes and changes in agricultural and natural resource industries that will apply across subregions within the West.

PROGRESS REPORT: 89/01 89/12

Members of #118 collected research in Population Change in the Rural West, edited by James C. Copp and John M. Wardwell, for the Rural Studies Series of the Rural Sociological Society. Progress continued with the editors providing critical reviews of final drafts. The manuscript will be submitted shortly after the end of the calendar year. Cook analyzed minority population change in Washington from 1980-87. Immigration of minorities exceeded that of the majority population from 1975-80 (1989b). Cook shows that most growth will be concentrated in large metro counties. Many nonmetro counties are projected to grow at a more rapid rate between 1988 and 2000 than they have in the 1980s (1989a). Cook's (1990) study of retirement migration from 1975-80 and 1980-85 supports viewing it as part of an economic development strategy in resource-based nonmetro counties. The collection, organization and critique of the explanations of the nonmetro turnaround continued. Comparing explanations for 1970s trends with nonmetro migration in the 1980s lends partial support to ecological and economic explanations and argues that residential preferences must be integrated with contextual economics to identify conditions under which preferences influence nonmetro migration (Wardwell, 1990a). Wardwell's term as Bulletin Index Editor of Rural Sociology began and included rural education (1989d, 1990b), migration and population change (1989c), agriculture and rural development (1989a), and general themes (1989b).

PUBLICATIONS: 00 ADDITIONAL PUBLICATIONS

COOK, ANNABEL K. 1989 Current and Future Change in Washington's Population. Census Notes, No. 25.

COOK, ANNABEL K. 1989 Washington's Minorities: 1980-87. Census Notes, No. 24.

COOK, ANNABEL K. 1990 Retirement Migration as a Community Development Option. Journal of the Community Development Society, (In Press).

WARDWELL, JOHN M. 1989 Agriculture and Rural Development. Rural Sociology, 54:293-300.

WARDWELL, JOHN M. 1989 Bulletin Index Review. Rural Sociology, 54: (No. 4, In Press).

WARDWELL, JOHN M. 1989 Migration and Rural Population Change. Rural Sociology, 54:481-490.

WARDWELL, JOHN M. 1989 Rural Education. Rural Sociology, 54:137-147.

AD-887 (11-88)		U.S. DEPARTMENT OF AGRICULTURE COOPERATIVE STATE RESEARCH SERVICE		CRS IS NO. 111920	
RESEARCH WORK UNIT/PROJECT ABSTRACT CURRENT RESEARCH INFORMATION SYSTEM				DATE 06 DEC 1990	
PROBLEMS OF OLDER AMERICANS & RELATED RESEARCH				START DATE 01 OCT 1986	
ACCESSION NO. 0099533				TERMINATION DATE 30 SEP 1991	
WORK UNIT/PROJECT NO. WNP00759		REGIONAL PROJECT NO. W 00176		CONTRACT/GRANT/AGREEMENT NO. HATCH	
LOCATION WASHINGTON STATE UNIVERSITY PULLMAN WASHINGTON 99164		PERFORMING ORGANIZATION CHILD & FAMILY STUDIES			
INVESTIGATORS DILLMAN J J					
TITLE HOUSING AND LOCATIONAL DECISIONS OF THE MATURING POPULATION: OPPORTUNITIES FOR THE WESTERN REGION					

FISCAL YEAR	USDA APPH/ CRS ADM	OTHER FEDERAL	NON FEDERAL	TOTAL	SYS
1989	\$484	\$0	\$14460	\$14904	.2

OBJECTIVES:

Develop a profile of selected aging populations including those who relocate, make seasonal moves, or age-in-place; identify considerations relevant to residential characteristics, support services, and finances important to informed housing decisions; compare rural and urban residents as to their mid- and later-life housing and locational decisions, especially rural directed relocation; and develop decision making criteria and strategies for family mid- and later-life housing and locational choices, and compare the aging population's housing and locational needs and choices and the rural communities' views and policies.

APPROACH:

State will perform all five objectives. Using zip code demography, counties with high portions of the selected populations, 40 years and over, will be identified. A mail questionnaire and common procedures will be used to collect data. To explore the potential for rural revitalization, the congruity between considerations identified by householders and attitudes of community and county governments of the desirability and feasibility of housing an aging population will be tested. Each state will contribute to a regional data base and state and regional analysis. The investigator will work with Cooperative Extension to develop and refine decision strategies for target audiences. The latter will be used to train key community and family decision makers.

PROGRESS REPORT: 89/01 89/12

The retirement plans 5562 respondents were examined in an effort to understand their early-retirement community location preferences. Two-thirds indicated a preference for their current community of residence and one-third (1872) preferred to move to another location for the first ten years of retirement. The responses of the 1872 potential migrants were then examined by their preference for a rural or urban location. Persons preferring a county with a major city of less than 50,000 population were more likely to hold a lower ranking occupation, possess a lower level of education, and currently earn a lower income than persons preferring a county with a major city of 50,000 or more population. Respondents preferring a rural location were less likely to have made decisions of when and/or where to retire than their urban preferring counterpart. Although medical facilities were ranked as first by both rural and urban groups, rural oriented respondents ranked low utility rates and low cost of living as second and third most important and placed a low value on convenient air transportation. In a separate analysis from the same study, the retirement plans of a sample of 1372 WA and ID land grant university employees over the age of 40 were examined in an effort to understand when retirement planning begins and to determine what factors influence that planning.

PUBLICATIONS: 00 ADDITIONAL PUBLICATIONS

DILLMAN, J.J. and JUNK, V.W. 1989. Pre-retiree' retirement decisions, actions, and plans: Factors which influence planners and doers. Proc. American Council on Consumer Interests. 1989:298-305.
DILLMAN, J.J. and JUNK, V.W. 1989. Community preferences for early retirement: Implications for housing in rural areas. AAHE Refered Conf. Papers. Am. Assoc. Housing Educators, Texas A&M Univ., College Station. 1989:51-65.
JUNK, V.W. and DILLMAN, J.J. (In Press). The importance of retirement community characteristics: Viewpoint of a maturing population. Housing and Society.
DILLMAN, J.J. and JUNK, V.W. (In Press). Pre-retirees' preferences for locating in rural or urban communities during early retirement. Proc. 23rd Annual Pacific Northwest Regional Econ. Conf. Northwest Policy Center. Univ. Washington.
JUNK, V.W. and DILLMAN, J.J. August 1989. Public policy and housing and migration of the maturing population: A working bibliography. No. 245. Council of Planning Librarians: Chicago.

AD-587 (11/88)		U.S. DEPARTMENT OF AGRICULTURE COOPERATIVE STATE RESEARCH SERVICE		CRS ID NO. 33320	
RESEARCH WORK UNIT/PROJECT ABSTRACT CURRENT RESEARCH INFORMATION SYSTEM				DATE 26 DEC 1990	
PROBLEMS OF OLDER AMERICANS & RELATED RESEARCH				START DATE 01 OCT 1987	
ACCESSION NO. 0132996		WORK UNIT/PROJECT NO. WSP00794		TERMINATION DATE 30 SEP 1992	
REGIONAL PROJECT NO. S 00216		CONTRACT/GRANT/AGREEMENT NO. HATCH		AGENCY DESIG. CSRS W.M.P	
LOCATION WASHINGTON STATE UNIVERSITY PULLMAN WASHINGTON 99164		PERFORMING ORGANIZATION AGRI ECONOMICS			
SYSTEMS					
PRICE D \$		PRICE D \$			
TITLE CHANGING PATTERNS OF FOOD DEMAND AND CONSUMPTION BEHAVIOR					

FISCAL YEAR	USDA APPN/ CSRS ADM	OTHER FEDERAL	NON FEDERAL	TOTAL	SYS
1989	\$23443	\$0	\$64085	\$87528	.9

OBJECTIVES:

To estimate food demand parameters with new and alternative theoretical and applied models, and to measure, assess and interpret changing patterns of food demand and consumption behavior, and to develop and evaluate data bases for food demand and consumption behavior.

APPROACH:

Estimate and evaluate partial demand systems for various food commodities (red meat, dairy products, fruits and vegetables) using both time series and cross-section data. The 1977-78 and 1987-88 USDA-NFCS household data will be used as cross-section data. Methodologically, methods of incorporating prices of specific food items into cross-section data will be explored. Estimate the relationship between food consumption patterns and socioeconomic variables for socio-demographic subgroups. Such subgroups include low income and elderly households. Relationships between consumption patterns and nutrient intake will be estimated. International food consumption patterns will be analyzed. Major focus will be on determination of consumer decision making patterns in selected Pacific Rim countries.

PROGRESS REPORT: 89/01 89/12

Preliminary testing of group decision making style-oriented questions was made with a limited data set (198 households). With only traditional variables related to food expenditures, the r value was .28. The addition of the decision-making variables raised the r value to .38. Thus, preliminary results show the decision-making variables to be important in explaining food consumption. The conceptual framework to explain the value of food characteristics has been enhanced by incorporating Maslow's need level theory with utility theory. One of the essential elements of the project is to combine food groups with similar characteristic values. Statistical tests show that hot cereals can combine with ready-to-eat cereals. Monte Carlo work has started to evaluate the Tobit and Heckman procedures for use with truncated variables and selected samples. In the area of international computer demand, two publications are near completion. Both focus on consumer decision making: one on newly developed Pacific Rim countries (South Korea, Hong Kong, and Singapore), and one on newly developing Pacific Rim countries (Indonesia, Malaysia, Philippines, and Thailand).

PUBLICATIONS: 00 ADDITIONAL PUBLICATIONS

GAN, YINGTAO. 1989. Changes in Chinese economic and social environments and Chinese consumers' saving behavior. M.A. thesis, Wash. State U., Pullman.
SHARMA, K.K. and PRICE, D.W. 1989. Incorporating nutritional and economies of size measures into specifications of age-sex composition. IS 1009, Coll. of Ag. and Home Econ., Wash. State U., Pullman.

AD-887 (11-88)		U.S. DEPARTMENT OF AGRICULTURE COOPERATIVE STATE RESEARCH SERVICE		CRS ID NO. 013320	
RESEARCH WORK UNIT/PROJECT ABSTRACT CURRENT RESEARCH INFORMATION SYSTEM				DATE 06 DEC 1990	
PROBLEMS OF OLDER AMERICANS & RELATED RESEARCH				START DATE 25 JUL 1988	
ACCESSION NO. 0135331		WORK UNIT/PROJECT NO. WNP00817		TERMINATION DATE 30 JUN 1991	
REGIONAL PROJECT NO.		CONTRACT/GRANT/AGREEMENT NO. HATCH		AGENCY IDENT. CSRS W.B.P	
LOCATION WASHINGTON STATE UNIVERSITY PULLMAN WASHINGTON 99164		PERFORMING ORGANIZATION FOOD SCIENCE & HUMAN NUTRITION			
INVESTIGATOR NITCHIEL N P					
TITLE MODEL BUILDING AND EVALUATION IN NUTRITION BEHAVIORAL RESEARCH					
FISCAL YEAR 1989		USDA APPN/ CSRS ADM \$4109	OTHER FEDERAL \$0	NON FEDERAL \$7545	TOTAL \$11654
					SYS .0

OBJECTIVES:

To evaluate a theoretical model of improving nutritional behavior of an older population through the use of the "Activated Health" model. To build and evaluate a model assessing changes in food patterns in multiethnic Muslim immigrants to the U.S. during and before the fast of Ramadan.

APPROACH:

Subjects will be selected from local districts in Washington State. Needs assessment questionnaires and belief questionnaire instruments have been partially developed and will be tested. The Total Design Method of Dillman will be used on mailed questionnaires. Modules for nutrition education will be based on needs assessment and dietary adequacy. Ramadan and non-Ramadan food patterns will be assessed. Data will be analyzed using standard statistical packages available for microcomputers and an IBM 3090 mainframe computer.

PROGRESS REPORT: 89/01 89/12

Questions generated from the model of dietary change of Muslims living in the U.S. were pretested with 18 non-local Muslims in the U.S. Cronbachs alpha and other statistical tests were used to determine internal consistency. Suitability/Religious questions showed the most deviation from consistency and were extensively rewritten. The questions aimed at soliciting change in food patterns were found ineffective because this group does not plan diets either at home or in the U.S. A new scale has been revised for this part of the study. Data on food intake of 30 subjects during Ramadan was collected in the Spring and is partially analyzed. Parts of these data were used to revise the change in food pattern section cited above. Subjects aged 65 + years (N=104) divided into 3 groups received nutrition education modeled on the activated health model, simple lecture format or none at all. Dietary intake records were completed pre-intervention, post intervention and 2 months postintervention. Subjects exposed to the health activated model (HAM) intervention changed dietary patterns as measured by food groups more than subjects exposed to lecture format or no intervention. Analysis of nutrient intake changes is being completed.

PUBLICATIONS: 00 ADDITIONAL PUBLICATIONS

NO PUBLICATIONS REPORTED THIS PERIOD.

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AD-252 (11-85)		U.S. DEPARTMENT OF AGRICULTURE COOPERATIVE STATE RESEARCH SERVICE		CRS ID NO. 033420	
RESEARCH WORK UNIT/PROJECT ABSTRACT CURRENT RESEARCH INFORMATION SYSTEM				DATE 26 DEC 1990	
PROBLEMS OF OLDER AMERICANS & RELATED RESEARCH				TERMINATION DATE 30 SEP 1989	
ACCESSION NO. 0097572		WORK UNIT/PROJECT NO. WVA00312		REGIONAL PROJECT NO. NE 00147	
LOCATION WEST VIRGINIA UNIV MORGANTOWN		HATCH		PERFORMING ORGANIZATION FAMILY RES & HEALTH STUDIES	
WEST VIRGINIA		26506		AGENCY BRCH. CSRS MVA	
HEAD N K					
TITLE IMPROVING SENSITIVITY OF METHODS TO ASSESS NUTRIENT INTAKE AND TO PREDICT NUTRITIONAL RISK					

PISCAL YEAR	USDA APPM/ CSRS ADM	OTHER FEDERAL	NON FEDERAL	TOTAL	SYS
1989	\$1638	\$0	\$331	\$1969	.0

OBJECTIVES:

To determine practical, reliable and cost effective methods of obtaining and evaluating dietary data.

APPROACH:

Portion studies will be carried out using methodology developed by Penn State. Data will be collected from college and high school students and possibly other groups. If aids to portion estimation are left to the choice of the individual station, selected food models and generic shapes and masses will be used.

PROGRESS REPORT: 35/11 89/09

Portion Estimation Study: Data on accuracy of portion estimation were collected from approximately 60 subjects, half of whom were college students and half from an extension homemaker group. Data were submitted to Pennsylvania State University, lead station. A manuscript containing results is being prepared. Accuracy of Food Frequency: Data were collected from approximately 30 undergraduate nutrition majors to compare calculated nutrient intake derived from reported frequency of consumption of various foods with nutrient intake calculated from three-day records of intake. Two sets of each type of data were obtained. Data were submitted to University of Massachusetts, lead station. Data analysis is progressing. Hawthorne Effect: Data have been collected from approximately 40 elderly subjects at three senior eating sites. Subjects' food consumption at the site was unobtrusively observed on Day 1, Round 1. The next day, Day 2, subjects were interviewed to determine accuracy of recall of food items served and amounts eaten at the site on the previous day. Subjects were informed that during subsequent weeks, they would again be interviewed periodically to determine their food intake at the eating site on the previous day. Three additional two-day rounds of data were collected and accuracy of recall from Round 1 was compared to accuracy from Rounds 2, 3, and 4. Data analysis has been completed. Results have indicated that they would be questioned. A Thesis is currently being written.

PUBLICATIONS: 00 ADDITIONAL PUBLICATIONS

THOMPSON, C., HEAD, N.K., and RODMAN, S.H. 1989. Factors influencing accuracy in estimating plate waste. J. Am. Dietet. Assoc. 87:1219, 1987.
MILLER, A., and HEAD, N.K. 1989. Effect of level of education on accuracy of 24-hour recall data. Poster presentation and Abstract, p. 205. Proceedings, American Dietetic Association Annual Meeting, October, 1989.

If this information is reproduced, published, or quoted, credit must be given to the project leader and the organization conducting the research. For program reports, it must be clearly stated that the information reflects only the results obtained during the period specified and final results are subject to completion of the investigation.

AD-887 (11/88)		U.S. DEPARTMENT OF AGRICULTURE COOPERATIVE STATE RESEARCH SERVICE RESEARCH WORK UNIT/PROJECT ABSTRACT CURRENT RESEARCH INFORMATION SYSTEM		CRS ID NO. 011220 DATE 06 DEC 1990	
PROBLEMS OF OLDER AMERICANS & RELATED RESEARCH				START DATE 13 FEB 1986	TERMINATION DATE 31 DEC 1990
ACCESSION NO. 2096872	WORK UNIT/PROJECT NO. WNP00675	REGIONAL PROJECT NO.	CONTRACT/GRAANT/AGREEMENT NO. RATCH	AGENCY IDENT. CSRS W.B.P	
LOCATION WASHINGTON STATE UNIVERSITY PULLMAN WASHINGTON 99164			PERFORMING ORGANIZATION APPAREL INT DESIGN & MERCHANDG		
INVESTIGATOR ROGERS, J. C.					
TITLE CLOTHING CONSUMPTION AND NATURAL FIBER USE OF OLDER RURAL URBAN WASHINGTON RESIDENTS					

FISCAL YEAR	USDA APPH/ CSRS ADM	OTHER FEDERAL	NON FEDERAL	TOTAL	SYS
1989	\$105	\$0	\$24274	\$24379	.4

OBJECTIVES:

Determine the clothing purchase practices of older rural and urban residents of eastern Washington; determine the extent to which older rural and urban residents of eastern Washington purchase apparel made of wool, cotton and other specific fibers; determine consumer use of care labeling and other clothing labels by older rural and urban residents of eastern Washington; provide information for older consumers which will assist them in making more satisfactory apparel purchases; determine the responses which older rural and urban residents of eastern Washington have to retail clothing store facilities and services; determine the degree to which apparel retailers in eastern Washington are aware of the needs which older consumers have for service and facilities; provide information to retailers which will assist them in providing improved service to older consumers.

APPROACH:

Survey method will be used to collect information from rural and urban female residents. These women will be selected randomly from sources of names of older women residents in eastern Washington counties.

PROGRESS REPORT: 89/01 89/12

The project questionnaire has been distributed to extension participants through county personnel. It has been returned and is currently being coded for statistical analysis.

PUBLICATIONS:

00 ADDITIONAL PUBLICATIONS
ROGERS, J.C. and MILLIKER, J.S. 1989. Color analysis: the retail apparel response. Journal of Home Economics. 81(3).

If this information is reproduced, published, or quoted, credit must be given to the project leader and the organization conducting the research. For program reports, it must be clearly stated that the information reflects only the results obtained during the period specified and final results are subject to completion of the investigation.

Cooperative State Research Service
Programs Which Impact Older Americans

Evans-Allen Program - Fiscal Year 1989 Expenditures - \$1,602,365

Funds are awarded on a formula basis to 16 predominantly black land-grant universities and Tuskegee University for the conduct of agricultural and forestry research.

AD-387 (11/88)		U.S. DEPARTMENT OF AGRICULTURE COOPERATIVE STATE RESEARCH SERVICE			CRIS ID NO. J4444	
RESEARCH WORK UNIT/PROJECT ABSTRACT CURRENT RESEARCH INFORMATION SYSTEM					DATE 16 DEC 1990	
PROBLEMS OF OLDER AMERICANS & RELATED RESEARCH					START DATE 01 OCT 1984	
ACCESSION NO. 7792733		WORK UNIT/PROJECT NO. ALAX-014-185		REGIONAL PROJECT NO. 28 00004		CONTRACT/GRANT/AGREEMENT NO. EVANS-ALLEN
LOCATION ALABAMA A & M UNIVERSITY NORMAL ALABAMA 35762		PERFORMING ORGANIZATION HOME ECONOMICS		TERMINATION DATE 30 SEP 1990		AGENCY IDENT. CSRS ALAX
INVESTIGATOR SMITH J		RICHARDSON B		JABREN A P		
QUALITY OF WELL BEING OF THE RURAL SOUTHERN ELDERLY: FOOD, CLOTHING, SHELTER						
FISCAL YEAR 1989		USDA APPN/ CSRS ADM \$82829		OTHER FEDERAL \$0	NON FEDERAL \$785	TOTAL \$83614
						SYS .7

OBJECTIVES:

To determine: Actual and perceived clothing, nutrition and housing status of the elderly as impacted by social, economic, psychological and physical factors; relationship between perceived and actual clothing, nutrition and housing status of the elderly; relative interdependence of nutrition, clothing, and housing status and perception of the elderly.

APPROACH:

A sample of 4,800 elderly persons will be selected from the rural south (16 states to include rural counties with no more than 30% urban population according to the 1980 census data). Data for the study will be descriptive and analytic. A major portion of the data will provide a descriptive analysis of nutrition, clothing, and housing status. A core questionnaire will be used. Sub-sample data collection will be gathered from a random selection of individuals identified as high risk from the core data analysis. The sub-sample analysis will consist of the following from each component: Nutrition-Biochemical, Dietary, Anthropometric, Blood Pressure; Housing-Perceptions, Internal Environment, Homogeneous Groupings; Clothing-Anthropometric, Social-psychological.

PROGRESS REPORT: 89/01 89/12

As a part of an 11-state regional research project, this project was designed to determine the quality of well-being of the rural elderly in Alabama by assessing the actual and perceived status of nutrition, clothing and housing, and the interdependence of these status parameters. All data (Core and Sub Sample) have been collected for the study. However, analysis to date has involved Core Data only. Consistent with national trends, the Core Data (collected from 300 rural elderly, age 65 and over) revealed that the elderly in Alabama are very seriously concerned about the costs of medical care, utilities and food; and their health and income. Food is considered a greater concern than housing or clothing. They are generally satisfied with life. A majority studied were satisfied with the location and safety of their homes, reaching retirement age, their accomplishments, problem solving ability and religious involvements. These preliminary findings present the elderly as a basically content group. However, a complete analysis of the Core and Sub Sample Data will provide a more comprehensive assessment of the rural Alabama elderly.

PUBLICATIONS: 00 ADDITIONAL PUBLICATIONS
NO PUBLICATIONS REPORTED THIS PERIOD.

AD-887 (11-88)		U.S. DEPARTMENT OF AGRICULTURE COOPERATIVE STATE RESEARCH SERVICE		CRS ID NO. J33420	
RESEARCH WORK UNIT/PROJECT ABSTRACT CURRENT RESEARCH INFORMATION SYSTEM				DATE 01 OCT 1984	
PROBLEMS OF OLDER AMERICANS & RELATED RESEARCH				TERMINATION DATE 30 SEP 1990	
ADDITIONAL NO. 0190055		WORK UNIT/PROJECT NO. ARK01218		CONTRACT/GRANT/AGREEMENT NO. RR 00004	
LOCATION UNIV OF ARKANSAS PINE BLUFF		REGIONAL PROJECT NO. ARKANSAS		PERFORMING ORGANIZATION HOME ECONOMICS	
INVESTIGATOR NEAL E. G.		PI WYATT M. C.		AGENCY IDENT. CSRS AR.X	
QUALITY WELL-BEING OF THE RURAL SOUTHERN ELDERLY: FOOD, CLOTHING, SHELTER					

FISCAL YEAR	USDA APPW/ CSRS ADM	OTHER FEDERAL	NON FEDERAL	TOTAL	SYS
1989	\$78905	\$0	\$512	\$79417	.5

OBJECTIVES:

To determine the actual and perceived clothing, nutrition and housing status of the elderly as impacted by social, economic, psychological and physical factors. To determine the relationship between perceived and actual clothing, nutrition and housing status of the elderly. To determine the relative interdependence of nutrition, clothing, and housing status and perception of the elderly.

APPROACH:

A sample of 4,800 elderly persons will be selected from the rural South (16 states to include rural counties with no more than 30% urban population according to the 1980 census data). Data for the study will be descriptive and analytic. The major portion of the data will provide for a descriptive analysis of the nutrition, clothing, and housing status. A core questionnaire will be used for this purpose. Subsample data will be collected from a random selection of individuals identified as high risk from the core data analysis. Subsample data will be collected for the following variables: (1) Housing - Perceptions, Internal Environment and Homogeneous Groupings; and (2) Clothing - Anthropometric and Social-psychological.

PROGRESS REPORT: 89/01 89/12

Sub-sample data on clothing and shelter were collected, verified, computed, and coded. Anthropometric measurements were obtained on participants in Cleveland, Prairie and Calhoun counties. These data were coded and forwarded to Alabama A & M for inclusion in the Data Base Booklet published October, 1989. Personnel from University of Arkansas at Pine Bluff participated in the Clothing Component Workshop held at Tennessee State to clarify data for a regional presentation. Core data were analyzed. Correlation coefficients and chi-square analyses were used to analyze Arkansas data for the clothing component. Correlational analysis identified income as a strong determinant of life satisfaction of the rural elderly. Results revealed that respondents with a higher income level were able to find the desired clothing. Further analyses indicated that the lower the total household income, the less satisfied the respondents were with their overall quality of well-being. Also, as the other basic needs (food, housing) were met, clothing plays a significant part in contributing to the life satisfaction of the respondents, particularly social interaction.

PUBLICATIONS: 00 ADDITIONAL PUBLICATIONS

NEAL, E.G. and STIGGER, F.E. "Clothing: Impact on Life Satisfaction of the Elderly." Eighth Biennial Research Symposium Proceedings, Washington, D.C., October, 1989.

NEAL, E.G. and STIGGER, F.E. "The Contribution of Clothing to the Quality of Well-Being of the Rural Elderly." Proceedings, 52nd Annual Meeting of the Rural Sociological Society, Seattle, Washington, D.C., August, 1989.

TAYLOR, S., NEAL, E.G., LEFTWICH, S., WASHINGTON, C. and STIGGER, F.E. "Contribution of Clothing to the Well-Being of the Elderly in Alabama, Arkansas, Tennessee and Virginia." Poster presentation, Eighth Biennial Research Symposium.

NEAL, E.G. and STIGGER, F.E. "Clothing as a Contributor to the Well-Being of the Elderly." Proceedings, Association for Gerontology and Human Development, Baltimore, MD, February, 1989.

AD-887 (11-88)		U.S. DEPARTMENT OF AGRICULTURE COOPERATIVE STATE RESEARCH SERVICE		CRS # NO.	
RESEARCH WORK UNIT/PROJECT ABSTRACT CURRENT RESEARCH INFORMATION SYSTEM				DATE 11/27	
PROBLEMS OF OLDER AMERICANS & RELATED RESEARCH				START DATE 01 OCT 1989	TERMINATION DATE 30 SEP 1990
ACCESSION NO. J795782	WORK UNIT/PROJECT NO. GEOR-4202	REGIONAL PROJECT NO. RR 00004	CONTRACT/AGENCY/AGREEMENT NO. EVANS-ALLEN	AGENCY IDENT. CSRS GEOR	
LOCATION FORT VALLEY STATE COLLEGE FORT VALLEY GEORGIA 31030			PERFORMING ORGANIZATION AGRI HOME ECONOMICS & ALLIED PROGRAMS		
INVESTIGATORS HUNT S K		JOHNSON L D		CONTER D B	
TITLE QUALITY OF WELL-BEING OF THE RURAL SOUTHERN ELDERLY: FOOD, CLOTHING, SHELTER					
FISCAL YEAR 1989		USDA APPW/ CSRS ADM \$58345	OTHER FEDERAL \$0	NON FEDERAL \$0	TOTAL \$58345
					SYN .6

OBJECTIVES:

To determine: Actual and perceived housing and nutritional status of the elderly as impacted by social, economic, psychological and physical factors; relationship between perceived and actual nutritional and housing status of the elderly; relative interdependence of nutrition and housing status and perception of the elderly.

APPROACH:

A sample of 4,800 elderly persons will be selected from the rural south (16 states to include rural counties with no more than 30% urban population according to the 1980 census data). Data will also be collected from a random selection of individuals identified from core data analysis who have been identified as high risk. The sub-sample analysis will consist of the following: Nutrition-Biochemical, Dietary, Anthropometric, Blood Pressure; Housing Perceptions, Internal Environment, Homogeneous Grouping. These data will be used to determine clothing, housing and nutrition and housing status and relationships between them.

PROGRESS REPORT: 89/01 89/12

The purpose of the project is to determine the quality of life of the rural elderly by assessing the nutrition, clothing and housing-actual and perceived-status and the interdependence between the status parameters. Phase I and II of the RR-4 project have been completed by Fort Valley State College. Phase I (Core Data) has been completed by all researchers at institutions in eleven states. Data Source Booklets will be published. Data analysis consisted of frequencies, percentages and correlations statistics. During Phase II (sub-sample data) of the project, dietary recalls were again collected from a sub-sample of participants in Phase I. Biochemical and anthropometric measures were collected. Several states are in the process of completing Phase II. Many papers have been presented by researchers in 11 states. The Georgia's sample data bank has been set up by computer and is on file. Presentations on results from this file have been presented at the Association of Research Directors' Eighth Biennial Research Symposium in October 1989.

Future plans include publication of a Data Source Booklet on data from all participating states, a training manual and presentations at professional organization meeting.

PUBLICATIONS:

00 ADDITIONAL PUBLICATIONS

HARTROVE, T.M. A Study of Nutritional Status of Rural Noninstitutionalized Elderly. Paper Presentation for 1989 Young Scholars Project and USDA Apprenticeship Program, August 1989.

HUNT, S.K. Implications of the Regional Project - Part II. Paper Presentation at AED Eighth Biennial Research Symposium, October 8-11, 1989.

JOHNSON, L.D. Implications of the Regional Project - Part I. Paper Presentation at AED Eighth Biennial Research Symposium, October 8-11, 1989.

AD-607 (11-88)		U.S. DEPARTMENT OF AGRICULTURE COOPERATIVE STATE RESEARCH SERVICE		CISR IS NO. 011920	
RESEARCH WORK UNIT/PROJECT ABSTRACT CURRENT RESEARCH INFORMATION SYSTEM				DATE 16 DEC 1990	
PROBLEMS OF OLDER AMERICANS & RELATED RESEARCH				TERMINATION DATE	
ACCESSION NO. 0095162		WORK UNIT/PROJECT NO. KY.X-50-85-07H		START DATE 14 MAR 1985	
REGIONAL PROJECT NO. RR 00004		CONTRACT/GRANT/AGENCY NO. EVANS-ALLEE		10 SEP 1991	
LOCATION KENTUCKY STATE UNIVERSITY FRANKFORT KENTUCKY 40601		PERFORMING ORGANIZATION HOME ECONOMICS		AGENCY BRN. CSRS KY.X	
IPF C 1		PANENAGALORE M		PANENAGALORE M	
TITLE QUALITY OF WELL BEING OF THE RURAL SOUTHERN ELDERLY: FOOD, CLOTHING, SHELTER					

FISCAL YEAR	USDA APPN/ CSRS ADM	OTHER FEDERAL	NON FEDERAL	TOTAL	SYS
1989	\$162892	\$0	\$0	\$162892	1.8

OBJECTIVES:

To determine the actual and perceived clothing, nutrition and housing status of the elderly as impacted by social, economic, psychological, and physical factors. To determine the relationship between perceived and actual clothing, nutrition and housing status of the elderly. To determine the relative interdependence of nutrition, clothing, and housing status and perception of the elderly.

APPROACH:

By using a cross-sectional design, approximately 300 persons 60 years or older will be studied: information to be collected through interview are demographics; food consumption, eating habits, and perceptions of nutritional status; housing, and housing satisfaction and perception; clothing resources, care, selections, and clothing satisfaction and perception; and an in-depth study on a subsample will be conducted through biochemical evaluation and anthropometric measurements. Findings will be consolidated and reported as a pool for the regional project as well as separately on Kentucky portions.

PROGRESS REPORT: 89/01 89/12

Survey and laboratory data collected from 366 (68 males and 298 females; 190 with age, <74 yrs and 176, >75 yrs; 22 African-American, 342 Caucasian and 2 native American) Kentucky elderly samples have been reviewed, edited, coded & entered in the computer system for analysis. Concerns on medical cost was most serious among these elders followed by poor health conditions, costs for food, utility bills & housing whereas concerns for clothing, transportation, unemployment, loneliness or governmental services were viewed as less serious. Elders ranked their concerns regarding food to be greatest and their money available for foods to be least adequate, when compared to those for clothing and housing. 60.8% of the participants indicate they have arthritis; 48.4% hypertension; 33.9% heart disease; 24.3% gastrointestinal problems; 24.0% hearing problems; 23.2% vision impairment; 21.9% kidney problems; 13.9% atherosclerosis; 18.1% asthma/respiratory problems; and 10.9% diabetes. A considerable number of participants stated needs for aid with shopping for groceries and clothing, cooking and household management. The Kentucky data have been merged with data collected by other participating institutions for further analysis. Additional biochemical analysis on human plasma and a controlled experiment with aging rats are in progress.

PUBLICATIONS: 00 ADDITIONAL PUBLICATIONS

LEE, C.J. and PANENAGALORE, M. 1989. Nutritional status of selected elderly persons in three seasons. *FASEB Journal* 3:A656 (2499).
LEE, C.J. and PANENAGALORE, M. 1989. Interrelationship of hematological and related indices in selected aging population in Kentucky. Abstracts - the 14th International Congress of Nutrition (#P1-84).
LEE, C.J. and PANENAGALORE, M. 1989. Nutritional status of selected elderly persons in three seasons: a follow-up study. Abstracts - the 14th International Congress of Nutrition (#P1-85).
PANENAGALORE, M., LEE, C.J. and WILSON, K. 1989. Adaptive response of rats with diet-induced adiposity to energy restriction. *Annals of Nutrition and Metabolism*. 33:39-48.

40-507 (1-68)		U.S. DEPARTMENT OF AGRICULTURE COOPERATIVE STATE RESEARCH SERVICE		ONE 2 NO.	
RESEARCH WORK UNIT/PROJECT ABSTRACT CURRENT RESEARCH INFORMATION SYSTEM				DATE 4/11/40	
PROBLEMS OF OLDER AMERICANS & RELATED RESEARCH				START DATE 01 OCT 1988	TERMINATION DATE 30 SEP 1990
ACCESSION NO.	WORK UNIT/PROJECT NO.	REGIONAL PROJECT NO.	CONTRACT/GRANT/AGREEMENT NO.	AGENCY IDENT.	
0295918	MD.A-HDT-0908	RR 00008	EVANS-ALLEN	CSRS RD-1	
LOCATION UNIV OF MARYLAND EASTERN SHORE PRINCESS ANNE MARYLAND 21853			PERFORMING ORGANIZATION HUMAN ECOLOGY		
PIERCEMENT		PUBLICATION ORIGINATOR			
ALKER, S. S.		RYSON, S.		KUNELACHEV, M.	
QUALITY WELL BEING OF THE RURAL SOUTHERN ELDERLY: FOOD, CLOTHING, SHELTER					

FISCAL YEAR	USDA APPR/ CSRS ADN	OTHER FEDERAL	NON FEDERAL	TOTAL	SYS
1989	\$78275	\$0	\$1812	\$80087	1.0

OBJECTIVES:

To determine the actual and perceived clothing, nutrition and housing status of the elderly as impacted by social, economic, psychological and physical factors. To determine the relationship between perceived and actual clothing, nutrition and housing status of the elderly. To determine the relative interdependence of nutrition, clothing, and housing status and perception of the elderly.

APPROACH:

A sample of approximately 300 elderly persons will be selected from rural counties in the State of Maryland with no more than 30% urban population according to the 1980 census data. Data for the study will be descriptive and analytic. The major portion of the data will provide for a descriptive analysis of the nutrition, clothing, and housing status. A core questionnaire will be used for this purpose. Sub-sample data collection will be gathered from a random selection of individuals identified from the core data analysis who have been identified as high risk. The sub-sample analysis will consist of the following for each component: (1) Nutrition-Biochemical, Dietary, Anthropometric, Blood Pressure.

PROGRESS REPORT: 89/01 89/12

Phase II - (Subsample Data Collection). The 24 hour dietary recall, anthropometric measurements, blood sample collection and interviews were completed. Data were coded on super-cal templates and sent to the statisticians at Alabama A&M University for analysis. Twenty-four hour dietary recall records were coded and sent for nutrient analysis. Biochemical analysis on collected blood samples were completed in the Human Nutrition Laboratory at the University of Maryland Eastern Shore. Phase II participants of the project were provided results of their nutrient biochemical analysis and blood pressure tests.

PUBLICATIONS:

00 ADDITIONAL PUBLICATIONS

ALKER, S.S., and KUNELACHEV, M. Presented a paper "Perceptions of Health and Nutrition Status by Rural Elders in Maryland", based on the preliminary State data at the annual meeting of the Association of Gerontology for Human Development.

HAFEZS, Y. and HUSSEIN, A. Assessment of the Nutritional Status of Elderly Women. Submitted for publication to The American Journal of Clinical Nutrition.

If this information is reproduced, published, or quoted, credit must be given to the project leader and the organization conducting the research. For progress reports, it must be clearly stated that the information reflects only the results obtained during the period specified and that results are subject to completion of the investigation.

AD-287 (11-88)		U.S. DEPARTMENT OF AGRICULTURE COOPERATIVE STATE RESEARCH SERVICE		CARS ID NO. J11220	
RESEARCH WORK UNIT/PROJECT ABSTRACT CURRENT RESEARCH INFORMATION SYSTEM				DATE 10 DEC 1990	
PROBLEMS OF OLDER AMERICANS & RELATED RESEARCH				START DATE 01 JUN 1985	
TERMINATION DATE 30 MAY 1991					
ADDRESSING NO. 0095473	WORK UNIT/PROJECT NO. RISK-4007	REGIONAL PROJECT NO. RR 00004	CONTRACT/GRANT/AGREEMENT NO. EVANS-ALLEN	AGENCY ABBV. CSRS RISA	
LOCATION ALCORN A AND N COLLEGE LORNAH MISSISSIPPI 39096			PERFORMING ORGANIZATION HOME ECONOMICS		
INVESTIGATOR GLOVER R R			IDRIS R		
TITLE QUALITY WELL BEING OF THE RURAL SOUTHERN ELDERLY: FOOD, CLOTHING AND SHELTER					

FISCAL YEAR	USDA APPR/ CSRS ADM	OTHER FEDERAL	NON FEDERAL	TOTAL	SYS
1989	\$178459	\$0	\$0	\$178459	1.1

OBJECTIVES:

To determine the actual and perceived clothing, nutrition and housing status of the elderly as impacted by social, economic, psychological and physical factors. To determine the relationship between perceived and actual clothing, nutrition and housing status of the elderly. To determine the relative interdependence of nutrition, clothing, and housing status and perception of the elderly.

APPROACH:

A sample of 4,000 elderly persons will be selected from the rural south (16 states to include rural counties with no more than 30% urban population according to the 1980 census data). Data for the study will be descriptive and analytic. The major portion of the data will provide for a descriptive analysis of the nutrition, clothing, and housing status. A core questionnaire will be used for this purpose. Sub-sample data collection will be gathered from a random selection of individuals identified from the core data analysis who have been identified as high risk. The sub-sample analysis will consist of the following for each component.

PROGRESS REPORT: 89/01 89/12

Data collection was completed for Phase II of this regional project. This phase included a survey of a subsample of twenty-three rural elderly participants from Clark, George and Walthall counties in Mississippi. The survey consisted of a 24-hours food recall and instruments designed and pretested to assess housing and clothing status. Blood pressure readings, anthropometric data (height, weight, triceps skinfold thickness, mid-arm circumference) and fasting blood samples were collected on each participant. Blood samples were analyzed for hemoglobin and hematocrit and for serum levels of total cholesterol, HDL, and LDL cholesterol, total protein, total iron, TIBC, and triglycerides. All subsample data were coded for merging with the regional data set and subsequent statistical analyses. Additionally, coding of dietary data collected during phase I of the study was completed during this period. A merged region-wide file containing core data collected in Phase I has been created by the

statisticians and distributed to each participating station. Core data for this station on disease incidences were analyzed for effects of sociodemographic variables and reported in two poster sessions at national meetings.

Additionally, regional core data on housing, nutrition, clothing and quality of well-being were completed and presented at a symposium at the Eight Biennial Symposium of the Association of Research Directors. Further analysis and interpretation of data is the next activity, which is in process.

PUBLICATIONS: 00 ADDITIONAL PUBLICATIONS

NO PUBLICATIONS REPORTED THIS PERIOD.

AD-87 (11/88)		U.S. DEPARTMENT OF AGRICULTURE COOPERATIVE STATE RESEARCH SERVICE		CRS ID NO. J11720	
RESEARCH WORK UNIT/PROJECT ABSTRACT				DATE 06 DEC 1990	
CURRENT RESEARCH INFORMATION SYSTEM				TERMINATION DATE	
PROBLEMS OF OLDER AMERICANS & RELATED RESEARCH				28 OCT 1988	
ACCESSION NO. 2136427		WORK UNIT/PROJECT NO. NO.X-QH88-517		CONTRACT/GRANT/AGREEMENT NO. EVANS-ALLEN	
REGIONAL PROJECT NO.		PERFORMANCE ORGANIZATION HUMAN NUTRITION RESEARCH PGH		AGENCY ORIGIN CSRS NO.X	
LOCATION LINCOLN UNIVERSITY JEFFERSON CITY MISSOURI 65101					
INVESTIGATORS WORDSTROM J W		TSUI J C			
TITLE RELATIONSHIPS BETWEEN NUTRITIONAL STATUS, HEALTH AND LONGEVITY IN OLDER ADULTS					

FISCAL YEAR	USDA APPN/ CSRS ADM	OTHER FEDERAL	NON FEDERAL	TOTAL	SYS
1989	\$125673	\$0	\$2306	\$127979	1.0

OBJECTIVES:

To continue observations on older adults initially surveyed in 1975 to obtain information on longitudinal relationships between various parameters of nutritional status and well-being. To assess changes in food habits that occur with aging. To assess changes in biochemical and anthropometric parameters that occur with aging.

APPROACH:

The 225 older adult survivors (as of Jan. 1, 1988) of the 537 originally surveyed in 1975 will be subjects of this study. Data collection will include degree of independence, nutritional status and health of each survivor, and cause of death for deceased subjects. All of these factors are to be related to data on nutritional status collected on each subject in 1975.

PROGRESS REPORT: 88/10 89/09

Dietary histories were taken on 146 men and 300 women living in central Missouri, aged 60-99 years, in 1975. By January 1, 1988, 52 males survived, 20 had died from cancer, 28 from coronary heart disease (CHD) and 46 from other causes. For females, 149 were still living, 20 had died from cancer, 54 from CHD and 77 from other causes. Average daily intakes in 1975 were significantly ($P<0.05$) different (after consideration of age and sex effects) for total kcal (2097 vs. 1948); fat (96.6 vs. 88.0 g); vitamin A (11,143 vs. 9,714 IU); niacin equivalents (30.1 vs. 28.0 mg); and oleic acid (41.9 vs. 37.9 g) for living compared to nonsurviving subjects, respectively. Men who died from CHD or other causes consumed significantly ($P<0.05$) less total calories and fat than men who either survived or died from cancer. Also, men who died from CHD consumed less ($P<0.05$) protein, saturated fat, oleic acid, zinc and cholesterol than men who survived. Men and women who died from cancer ate more ($P<0.05$) linoleic acid than those who died from CHD or other causes. No other significant differences were found in dietary intakes for women related to cause of death.

PUBLICATIONS:

00 ADDITIONAL PUBLICATIONS

WORDSTROM, J., HOLT, V. and TSUI, J. 1989. Relationships Between Dietary Intake and Mortality in Older Adults. *FASEB Journal* 3:1354.
 KOHRS, M.B., CZAJKA-MAEINS, D. and WORDSTROM, J. 1989. Factors Affecting Nutritional Status of the Elderly. In: *Human Nutrition: A Comprehensive Treatise*. Ed. by Munro and Danford. New York: Plenum Press.
 HOLT, V., WORDSTROM, J. and KOHRS, M.B. 1988. Changes in Food Preferences of the Elderly Over a Ten Year Period. *Journal of Nutrition for the Elderly*. 7:23-34.

AD-827 (11/82)		U.S. DEPARTMENT OF AGRICULTURE COOPERATIVE STATE RESEARCH SERVICE		CSRS ID NO. 733220	
RESEARCH WORK UNIT/PROJECT ABSTRACT CURRENT RESEARCH INFORMATION SYSTEM				DATE 10 DEC 1990	
PROBLEMS OF OLDER AMERICANS & RELATED RESEARCH				TERMINATION DATE 30 SEP 1991	
ACCESSION NO. 7132663	WORK UNIT/PROJECT NO. MO4-QH86-515	REGIONAL PROJECT NO.	CONTRACT/GRANT/AGREEMENT NO. EVANS-ALLEN	AGENCY IDENT. CSRS NO. X	
LOCATION LINCOLN UNIVERSITY JEFFERSON CITY MISSOURI		65101	PERFORMING ORGANIZATION HUMAN NUTRITION RESEARCH PGM		
INVESTIGATOR HOLNAR I. R.		GLASER J. F.			
TITLE DIETARY INTAKE OF ZINC (HAIR ZINC CONTENT) AND DEGREE OF CONTROL IN ADULT ONSET DIABETICS					
FISCAL YEAR 1989	USDA APPH/ CSRS ADM \$97394	OTHER FEDERAL \$0	NON FEDERAL \$1602	TOTAL \$88906	SYS - 9

OBJECTIVES:

Investigate the relationship between zinc nutrition and degree of control in adult onset diabetes.

APPROACH:

Adult onset diabetic subjects and adult non-diabetic subjects from four Missouri areas will be evaluated for zinc and nutritional status on the basis of food records and hair analyses. Hair samples taken from subjects will be analyzed for zinc determination. Degree of control of diabetes will be assessed. Relationship between dietary zinc intake and degree of control for adult onset diabetes will be determined.

PROGRESS REPORT: 88/10 89/09

Progress continued toward the project objective to investigate the relationship between dietary zinc and diabetes control. 149 of 150 subjects participated in first-round interviews; 122 subjects participated in second-round interviews. The 19% attrition was due to death, hospitalization, refusal and relocation. Samples from first-round collections of hair, water, urine as well as two food records and socioeconomic data were analyzed. Second-round collections of samples were stored until analytical work can be performed. Food records from the 122 subjects were entered in the computer and print-outs checked for accuracy. Test score means were obtained for male and female diabetics and male and female controls. Comparing the impact of age, there was a negative correlation to test scores for all groups, while males did not reach significance ($p < .05$). For all four groups, education was positively correlated to test scores ($p < .05$). For the four groups studied, the energy level (kcal/d) was determined to be suboptimal for RDA. Mean nutrient intake values were adequate for protein, vitamin A, vitamin C and iron. The intake of zinc was adequate for male non-diabetics but low for the other three groups. Calcium intake was low for female diabetics and controls.

PUBLICATIONS: 00 ADDITIONAL PUBLICATIONS

GLASER, J. F., BLEICH, D. and HOLNAR, I. G. 1989. Heterogeneity of Adult-Onset Diabetics. 80. Home Economics Convention. Oral; Abstract in Images of Missouri Home Economics Association.

GLASER, J. F., BLEICH, D. and HOLNAR, I. G. 1989. Older Adult Diabetics: Nutrition Knowledge and Nutrient Intake. American Home Economics Conv. Poster; Abstract in Abstracts of Research Presentation.

If this information is reproduced, published, or quoted, credit must be given to the project leader and the organization conducting the research. For progress reports, it must be clearly stated that the information reflects only the results obtained during the period specified and final results are subject to completion of the investigation.

AD-827 (11-88)		U.S. DEPARTMENT OF AGRICULTURE COOPERATIVE STATE RESEARCH SERVICE		CRS ID NO. 733920	
RESEARCH WORK UNIT/PROJECT ABSTRACT CURRENT RESEARCH INFORMATION SYSTEM				DATE 16 DEC 1990	
PROBLEMS OF OLDER AMERICANS & RELATED RESEARCH				START DATE 15 JAN 1987	TERMINATION DATE 30 SEP 1991
ACCESSION NO. 0131091	WORK UNIT/PROJECT NO. MOX-0886-516	REGIONAL PROJECT NO. RR 00004	CONTRACT/GRAANT/AGREEMENT NO. EVANS-ALLEN	AGENCY IDENT. CRS NO. 1	
LOCATION LINCOLN UNIVERSITY JEFFERSON CITY MISSOURI 65101			PERFORMING ORGANIZATION HUMAN NUTRITION RESEARCH PGH		
INVESTIGATOR TSUI J C		ANDERSON J		TALLEY B	
TITLE QUALITY OF WELL BEING OF THE RURAL SOUTHERN ELDERLY: FOOD, CLOTHING, SHELTER					

FISCAL YEAR	USDA APPW/ CRS ADM	OTHER FEDERAL	NON FEDERAL	TOTAL	SYS
1989	\$63280	\$0	\$1161	\$64441	.5

OBJECTIVES:

To determine the quality of life of the rural elderly by assessing the nutritional, clothing and housing actual and perceived status and the interdependence between and among the status parameters.

APPROACH:

To participate in planning and decision-making in regard to data collection, construction of questionnaire and data analysis. To select the respondents and train interviewers for data collection. To gather the core data for housing, clothing and nutrition. To work closely with the Steering Committee in executing the overall objectives of the research project.

PROGRESS REPORT: 88/10 89/09

Quality of well-being in terms of food, clothing and shelter was studied in 2,969 elderly persons (aged 63 and over) from 63 rural counties in 11 states (300 subjects from Missouri.) Among the subjects 15% of them were black females, 65% were white females, 4% were black males and 16% were white males. The core data including demographic, clothing, housing and nutrition information were collected by a questionnaire interview. A 24-hour food recall method was used to obtain the dietary information. The preliminary analysis of the core data revealed several fundamental research findings related to the elderly. The results indicated that among three basic needs, food is the greatest and clothing is the least concern to the old adults. The majority of the majority of the elderly considered that medical cost is their greatest concern. Over 80% of the subjects believed they always eat nutritious meals. However, nutrient analysis of 24-hour food recall data indicated that the mean energy and calcium intakes were less than 80% of the Recommended Dietary Allowance for energy and calcium. More than 60% of the subjects considered they were in good health. Arthritis, hypertension and vision impairment were considered to be three major health problems in the elderly. A sub-sample study was followed up and in-depth data on anthropometric, biochemical, dietary measurements and perceptions of housing and clothing were obtained.

PUBLICATIONS: 00 ADDITIONAL PUBLICATIONS

NO PUBLICATIONS REPORTED THIS PERIOD.

If this information is reproduced, published, or quoted, credit must be given to the project leader and the organization conducting the research. For program reports, it must be clearly stated that the information reflects only the results obtained during the period specified and final results are subject to completion of the investigation.

AD-887 (11/88)		U.S. DEPARTMENT OF AGRICULTURE COOPERATIVE STATE RESEARCH SERVICE		CRS NO. NO.	
RESEARCH WORK UNIT/PROJECT ABSTRACT CURRENT RESEARCH INFORMATION SYSTEM				DATE 01 OCT 1986	
PROBLEMS OF OLDER AMERICANS & RELATED RESEARCH				01 OCT 1986	
ACCESSION NO.	WORK UNIT/PROJECT NO.	REGIONAL PROJECT NO.	CONTRACT/GRANT/AGREEMENT NO.	ABSTRACT NO.	TERMINATION DATE
2131576	SC.X-309-01-87	BB 00004	EVANS-ALLEN		30 SEP 1990
LOCATION SOUTH CAROLINA STATE COLLEGE ORANGEBURG SOUTH CAROLINA 29117			PERFORMING ORGANIZATION SCHOOL OF HOME ECONOMICS		
UNIVERSITY/INSTITUTION GLCVPR L.B.			EVANS H.F.		
QUALITY OF WELL BEING OF THE RURAL SOUTHERN ELDERLY: FOOD, CLOTHING, SHELTER					
FISCAL YEAR	USDA APPN/ CS&S ADM	OTHER FEDERAL	NON FEDERAL	TOTAL	SYS
1989	\$76224	\$0	\$0	\$76224	.5

OBJECTIVES:

The specific objectives are to determine the actual and perceived clothing, nutrition and housing status of the elderly as impacted by social, economic, psychological, and physical factors; to determine the relationship between perceived and actual clothing, nutrition and housing status of the elderly; and to determine the relative interdependence of nutrition, clothing, and housing status and perception of the elderly.

APPROACH:

Approximately 300 elderly persons, 65 years and older, will be selected from six randomly selected rural counties in South Carolina. Enumerated districts and sample units (60) will be assigned and allocated. Demographics, nutrition, foods, clothing, and quality of well-being data will be collected via interviews using a precoded questionnaire. Data analyses will be descriptive and analytical.

PROGRESS REPORT: 87/03 90/09

Data for Phase I were collected via a pre-tested questionnaire by trained, county specific interviewers from 300 non-institutionalized, ambulatory, mentally alert individuals, 65 years or older, residing in 6 rural counties in South Carolina - Sumter, Aiken, Beaufort, Williamsburg, Lancaster, Colleton - which included 60 sampling units and 40 enumerated districts and/or tracts, Summer 1987 - Spring 1988. Data for Phase II (Subsample of Phase I), were collected from 57 randomly selected subjects in four counties - Aiken, Colleton, Sumter, and Williamsburg, Fall/Winter 1988. Status evaluation included biochemical and anthropometric measurements, 24-hour Diet Recall, interviewer's observational assessment, and subject's response to a pre-tested questionnaire. The Human Subject Committee approved each Phase of the project. The participants were grouped into 3 categories based on their age: young-old (64-74 yrs.); old (75-84 yrs.); and old-old (85+ yrs.). Preliminary regional data analyses indicate that the rural elders intakes of calcium, vitamin A and dietary fiber were low irrespective of age, race or sex and more than half of them met or exceeded RDA standard for niacin, protein, vitamin C, riboflavin and phosphorus. The elders perception of their diet appears to be based on the quantity of food consumed - higher intake means better diet - without considering the qualitative aspects. Most elders spend \$100.

PUBLICATIONS: 02 ADDITIONAL PUBLICATIONS

GLOVES, L.B. and EVANS, H.F. 1990. Quality of Well Being of the Rural Elderly in South Carolina: Food, Clothing, Shelter. Research Bulletin No. 54, South Carolina State College, Orangeburg, South Carolina. (in progress).

RESEARCH WORK UNIT/PROJECT ABSTRACT CURRENT RESEARCH INFORMATION SYSTEM		CRRS ID NO. 11322
PROBLEMS OF OLDER AMERICANS & RELATED RESEARCH		START DATE 01 OCT 1984
ACCESSION NO. 0093544	WORK UNIT/PROJECT NO. TENN-8502-7-HW17	TERMINATION DATE 31 DEC 1988
LOCATION TENNESSEE STATE UNIVERSITY NASHVILLE TENNESSEE	REGIONAL PROJECT NO. 37203	CONTRACT/GRANT/AGREEMENT NO. EVANS-ALLEN CSRS TENN
INVESTIGATORS HUSAINI, B. LINN, J.G.		PERFORMING ORGANIZATION HOME ECONOMICS
TITLE PREDICTORS OF DEPRESSION: A FOLLOW-UP STUDY OF URBAN RESIDENTS IN TENNESSEE		

FISCAL YEAR	USDA APPN/ CSRS ADM	OTHER FEDERAL	NON FEDERAL	TOTAL	SYS
1989	\$56757	\$0	\$0	\$56757	.1

OBJECTIVES:

To examine the stability or change in level of depressive symptoms over a four-year period. Chronic medical problems as they relate to depressive symptomatology at t(1) and to changes in symptoms at t(2) and t(3). Life events as they relate to depressive symptomatology at t(1), t(2), and t(3). How medical problems and life events jointly influence depressive symptomatology at t(1), t(2), and t(3). How increases or decreases between t(1) and t(3) in both medical problems and life events relate to level of symptomatology. Whether social support and the individual's internal coping resources moderate the influence of medical problems and life events upon depressive symptomatology both at t(1), t(2), and t(3), and Sociodemographic factors as they relate to symptomatology at t(1), t(2), and t(3) as well as to changes in symptoms over time.

APPROACH:

This research will examine chronic medical problems and life events as risk factors in depressive symptomatology in an urban area through follow-up interviews with 750 Nashville, Tennessee residents interviewed in 1980. This study uses a design with two waves of data collected at six-month intervals. Data will be available at three points: t(1), (original) and t(2) and t(3) [collected at six-month intervals]; diagnostic interview schedule giving clinical diagnosis; providing controls for cultural homogeneity -- this provides for rural-urban differences in changes in predictors of depression over time.

PROGRESS REPORT: 88/01 88/12

A primary objective of this investigation was to assess chronic medical problems and stressful life events as determinants of symptoms of depression over time. Out results on 503 urban residents of Metropolitan Nashville, Tennessee show that both the total number of chronic medical problems as well as specific groups of related problems (e.g., problems of circulatory, digestive, and genitourinary systems) have significant effects upon the psychological wellbeing of individuals. The role of medical problems in depression is further evident from the analyses of the mobility groups which showed that the newly depressed had experienced more medical problems while recovered had the highest decline in medical problems during the five-year period. For the total sample, however, the influence of chronic physical illness on depression did not hold up for a relatively long period of time (a five-year period between t1 and t2). Furthermore, symptoms of depression measured at t1 did not relate to the report of medical problems obtained at the follow-up. Other analyses of this study show the stability over time of both chronic physical illness and depressive symptoms. It was not unexpected that individuals with many chronic medical problems in 1980 would tend to report many chronic physical illnesses in 1985. Also, the evidence of continuity in depressive symptoms over the five years covered by the study was not unanticipated.

PUBLICATIONS: 00 ADDITIONAL PUBLICATIONS

HUSAINI, B.A., LINN, J.G. and ZAHARIAS, J. 1988. Health care behavior among urban black and white women. Journal of Health and Social Policy. In Press.

LINN, J.G. and HUSAINI, B.A. 1988. Community satisfaction, life stress, social support, and mental health in rural and urban southern black communities. Journal of Community Psychology. In Press.

LINN, J.G. and HUSAINI, B.A. 1988. Chronic illness, coping resources, and psychological distress among the rural and urban black elderly. In S. HYZ and G. KIGER (editors) Emerging issues in impairment and disability studies.

HUSAINI, B.A. and LINN, J.G. 1988. Stress and depression in rural and urban American communities: Longitudinal studies. Indian Journal of Social Psychology. 2.311-338.

U.S. DEPARTMENT OF AGRICULTURE COOPERATIVE STATE RESEARCH SERVICE				CRS IS NO. 011220	
RESEARCH WORK UNIT/PROJECT ABSTRACT CURRENT RESEARCH INFORMATION SYSTEM				DATE 26 DEC 1990	
PROBLEMS OF OLDER AMERICANS & RELATED RESEARCH				START DATE 01 JUL 1985	
ACCESSION NO. WORK UNIT/PROJECT NO. REGIONAL PROJECT NO. CONTRACT/GRANT/AGREEMENT NO.				TERMINATION DATE 30 SEP 1990	
0296056		TEX-0025		RR 00004	
EVANS-ALLEN		CSRS TEX			
LOCATIONS PRAIRIE VIEW A&M UNIVERSITY PRAIRIE VIEW TEXAS 77446				PERFORMING ORGANIZATION COLLEGE OF HOME ECONOMICS	
PIERCE J		MORE E L		RIGGS D L A	
TITLE QUALITY OF WELL BEING OF THE RURAL SOUTHERN ELDERLY: FOOD, CLOTHING, SHELTER					
FISCAL YEAR 1989		USDA APPW/ CSRS ADM \$280485		OTHER FEDERAL \$0	
				NON FEDERAL \$0	
				TOTAL \$280485	
				SYS 1.6	

OBJECTIVES:

To determine the actual and perceived clothing, nutrition and housing status of the elderly as impacted by social, economic, psychological and physical factors. To determine the relationship between perceived and actual clothing, nutrition and housing status of the elderly. To determine the relative interdependence of nutrition, clothing, and housing status and perception of the elderly.

APPROACH:

A sample of 4,800 elderly persons will be selected from the rural south (16 states to include rural counties with no more than 30% urban population according to the 1980 census data). Data for the study will be descriptive and analytic. The major portion of the data will provide for a descriptive analysis of the nutrition, clothing, and housing status. A core questionnaire will be used for this purpose. Sub-sample data collection will be gathered from a random selection of individuals identified from the core data analysis who have been identified as high risk. The sub-sample analysis will consist of the following for each component: (1) Nutrition-Biochemical, Dietary, Anthropometric, Blood Pressure.

PROGRESS REPORT: 87/10 88/09

During FY '88, the research objectives of the project were: To complete core data collection on three hundred elderly persons (65+ years) in the six rural sample counties in Texas. To complete data entry for three hundred sample persons. To complete descriptive statistical analyses for core data. To complete data collection on sixty elderly sample persons for the nutrition, housing and clothing sub-sample. Core data were collected on 260 elderly persons in six rural Texas counties (Burleson, Jasper, Polk, San Jacinto, Wise and Motley). This represented an 86.6% response rate for the total project. Data were entered on SuperCalc spreadsheets and sent to the statisticians for merger with the data from the other ten states participating in the regional project. Dietary data were coded and entered on scan sheets for approximately 250 subjects. The data tape is not yet complete, so data analysis has not been completed as planned.

PUBLICATIONS: 00 ADDITIONAL PUBLICATIONS
NO PUBLICATIONS REPORTED THIS PERIOD.

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AD-887 (11-88)		U.S. DEPARTMENT OF AGRICULTURE COOPERATIVE STATE RESEARCH SERVICE		CRS # NO. 331923	
RESEARCH WORK UNIT/PROJECT ABSTRACT CURRENT RESEARCH INFORMATION SYSTEM				DATE 06 DEC 1990	
PROBLEMS OF OLDER AMERICANS & RELATED RESEARCH				START DATE 01 OCT 1984	TERMINATION DATE 30 SEP 1990
ACCESSION NO. 0295149	WORK UNIT/PROJECT NO. TENX-3502-7-RN18	REGIONAL PROJECT NO.	CONTRACT/GRANT/INTEREST NO.	ABSTRACT NO.	
LOCATION TENNESSEE STATE UNIVERSITY NASHVILLE TENNESSEE		37203	EVANS-ALLEN PERFORMING ORGANIZATION HOME ECONOMICS	CSRS TENX	
INVESTIGATORS DINKINS J		TAYLOR S	GORDIN S		
TITLE QUALITY OF WELL-BEING OF THE RURAL SOUTHERN ELDERLY: FOOD, CLOTHING AND HOUSING					

FISCAL YEAR	USDA APPN/ CSRS ADM	OTHER FEDERAL	NON FEDERAL	TOTAL	SYS
1989	\$147530	\$0	\$0	\$147530	1.0

OBJECTIVES:

To determine the actual and perceived clothing, nutrition and housing status of the elderly as impacted by social, economic, psychological, and physical factors; to determine the relationship among the perceived and actual clothing, nutrition and housing needs of the elderly; and to determine the relative interdependence of nutrition, clothing and housing status and perception of the elderly.

APPROACH:

A sample of approximately 4,800 elderly persons will be selected from the rural south (16 states). Procedures for accomplishing the objectives will consist of six steps: selection of respondents, training of interviewers, construction of the core instrument, collection of data, analysis of data, and reporting of findings. All states will be involved in the core instrument construction. All states will interview respondents according to the sampling plan.

PROGRESS REPORT: 89/01 89/09

Quality of Well-Being of the Rural Southern Elderly: Food, Clothing and Shelter is a regional project designed to address the actual and perceived clothing, nutrition and housing status of the elderly as impacted by social, economic, psychological and physical factors. This eleven state, five-year study was divided into two phases. All states have completed Phase I. The introduction and methodology sections of the state data booklet have been completed. Data from Phase I are in the process of being statistically analyzed. Demographics of the 300 participants from Tennessee are: females 240 (80%), males 60 (20%); Blacks 24 (8%), Whites, 276 (92%); age range 65 to 74-176 (58.7%), 75 to 84-108 (36%), 85 and over - 19 (6.3%); marital status - married 148 (49.3%), widowed 131 (43.7%), single 15 (5.0%), and divorced 6 (2.0%) Phase II collection of data has been completed. Data included nutritional analyses of blood samples, blood pressure readings, anthropometrics, 24 hour recalls, and responses to the 20 page questionnaire. Additionally, during this period, ancillary studies were conducted by Tennessee researchers in nutrition, consumer services, and stereotypical images of the elderly. Phase II regional data are currently being analyzed by the project statistician. The introduction and methodology sections of the state data base booklet for Phase II have been completed.

PUBLICATIONS: 00 ADDITIONAL PUBLICATIONS

NO PUBLICATIONS REPORTED THIS PERIOD.

AD-507 (11/88)		U.S. DEPARTMENT OF AGRICULTURE COOPERATIVE STATE RESEARCH SERVICE		CRS ID NO. 033920	
RESEARCH WORK UNIT/PROJECT ABSTRACT CURRENT RESEARCH INFORMATION SYSTEM				DATE 36 DEC 1990	
PROBLEMS OF OLDER AMERICANS & RELATED RESEARCH				START DATE 01 OCT 1984	
ACCESSION NO. 0296241 WORK UNIT/PROJECT NO. VAR-521249 REGIONAL PROJECT NO. RB 00004 CONTRACT/GRANT/AGREEMENT NO. EVANS-ALLEN AGENCY IDENT. CSRS VA.1				TERMINATION DATE 30 SEP 1990	
LOCATION VIRGINIA STATE UNIVERSITY PETERSBURG VIRGINIA 23803				PERFORMING ORGANIZATION AGRICULTURAL RESEARCH STATION	
INVESTIGATOR MCCRAY M		LEFTWICH S		LEFTWICH S	
TITLE "QUALITY OF WELL BEING OF RURAL SOUTHERN ELDERLY: FOOD, CLOTHING, SHELTER"					

FISCAL YEAR	USDA APPW/ CSRS ADM	OTHER FEDERAL	NON FEDERAL	TOTAL	SYS
1989	\$125407	\$0	\$0	\$125407	1.5

OBJECTIVES:

To determine the actual and perceived clothing, nutrition and housing status of the elderly as impacted by social, economic, psychological and physical factors. To determine the relationship between perceived and actual clothing, nutrition and housing status of the elderly. To determine the relative interdependence of nutrition, clothing and housing status and perception of the elderly.

APPROACH:

A sample of 4,800 elderly persons will be selected from the South (16 states to include rural counties of no more than 30% urban population according to the 1980 Census data). The Virginia sample will include 300 elderly persons 65 yrs. or older residing in the Southside Virginia area. The data for the study will be descriptive and analytic. The major portion of the data will provide for a descriptive analysis of nutrition, clothing and housing status. A core questionnaire will be used for this purpose. Virginia will participate in the collection of core and sub-sample data. Sub-sample data collection will be gathered from a random selection of individuals identified from the core data who have been identified as high risk.

PROGRESS REPORT: 89/01 89/12

A three-fold purpose for this study is: to determine the actual and perceived clothing, nutrition and housing status of the elderly as impacted by social, economic, psychological and physical factors; to determine the relationship between perceived and actual clothing, nutrition and housing status of the elderly; and to determine the relative interdependence of nutrition, clothing, and housing status and perception of the elderly. This project consist of two phases: Phase I and II. Phase I procedures included the collection of data through interviewing 289 elderly persons in six rural counties in Virginia (Mecklinburg, Mottaway, Charlotte, Pulaski, Rockingham and Spotsylvania). Phase II includes sub-sample areas wherein twenty-eight (28) selected elderly persons in the counties have consented to participate through being involved in the physical examinations, blood collection for nutrient analysis and anthropometrics procedures. The data is being analyzed.

PUBLICATIONS: 00 ADDITIONAL PUBLICATIONS

LEFTWICH, S., NEAL, E., TAYLOR, S. & WASHINGTON, C.S. 1989. Clothing as a Contributor to the well-being of the Rural Elderly in Alabama, Arkansas, Tennessee and Virginia. Poster presented at ARD Research Symposium, Arlington, VA.

Cooperative State Research Service
Programs Which Impact Older Americans

Competitive Research Grants - Fiscal Year 1989 Expenditures - \$27,577

This program funds basic research in selected high priority areas related to plant production and human nutrition. The competitive research grants complement the ongoing research efforts of the USDA and the traditional agricultural research arena by encouraging the participation of outstanding research scientists throughout the entire U.S. scientific community who have expertise in the selected areas.

AD-887 (11/88)		U.S. DEPARTMENT OF AGRICULTURE COOPERATIVE STATE RESEARCH SERVICE		CRS # NO. JJJ720	
RESEARCH WORK UNIT/PROJECT ABSTRACT CURRENT RESEARCH INFORMATION SYSTEM				DATE 07 DEC 1990	
PROBLEMS OF OLDER AMERICANS & RELATED RESEARCH				TERMINATION DATE 30 SEP 1990	
ACCESSION NO. 0133589	WORK UNIT/PROJECT NO. NO-00209-1	REGIONAL PROJECT NO.	START DATE 15 SEP 1987	CONTRACT/GRANT/AGREEMENT NO. 87-CNCR-1-2575	AGENCY ABBV. CSGO NO.
LOCATION UNIVERSITY OF MISSOURI COLUMBIA MISSOURI 65211			PERFORMING ORGANIZATION HUMAN ENVIRONMENTAL SCIENCES		
INVESTIGATOR HILL G M					
TITLE ESTIMATION OF DAILY COPPER INTAKE					

FISCAL YEAR	USDA APPN/ CSRS ADM	OTHER FEDERAL	NON FEDERAL	TOTAL	SYS
1989	\$27577	\$0	\$0	\$27577	.0

OBJECTIVES:

PROJ. #8700230. To determine the 500 most commonly consumed foods across age and sex groups, to determine their copper content, and to estimate copper intake in males and females in various age groups.

APPROACH:

500 Foods. Utilizing NHANES data and 1977-78 USDA NFCS data, the 500 most commonly consumed foods will be determined. Contributing to our daily foods but not analyzed are fast food dishes. The 500 foods to be analyzed include (1) foods known to be high in copper, (2) foods sold by fast food chains, restaurants and (3) foods most frequently consumed by the 12 sex/age groups of the NFCS. Food Analysis. Foods will be blenderized; samples will be wet ashed and diluted with deionized-distilled water for analysis by atomic absorption spectrophotometry. Estimation of Intake. Copper consumed daily will be determined by computer analysis (Morgan et al., 1985) using the copper concentrations in 500 analyzed foods and the frequency of foods consumed (NFCS).

PROGRESS REPORT: 89/01 89/12

Since there is no RDA for CU and the intake of individuals in various age and sex groups is unknown, our analysis of over 500 foods currently available in the market place will be useful in predicting daily intake. Foods were analyzed by atomic absorption spectrometry after preparation for consumption, and copper values on an as-consumed as well as dry basis were calculated. Nuts continue to provide the largest amount of copper when equal quantities of food are considered, and foods containing chocolate are also a good source. Cheese appears to provide more copper than once thought. Legumes/beans also provide copper to our diet. Historically, shellfish were believed to be one of the primary copper suppliers to our diet but on an "as consumed" basis, this may not be true. Most fruits, vegetables and dairy products do not make major contributions to our daily copper intakes. Our analysis of red meats is not complete at this time. However, upon completion, we will be predicting current copper intakes of Americans.

PUBLICATIONS: 00 ADDITIONAL PUBLICATIONS

HILL, G.M., KRAUSE, G.F., BELLERGERT, L.B., LINK, J.E. and ASPAW, A. 1989. Changes in copper content of fruits and vegetables (1929-1988). *FASEB J.* 1:1658.

TIEHANN, T.J. 1989. A comparison of historical and present-day copper concentrations of foods. M.S. Thesis. Univ. of Missouri, Columbia. 99p.

AD-887 (11/88)		U.S. DEPARTMENT OF AGRICULTURE COOPERATIVE STATE RESEARCH SERVICE		CRS ID NO. J33920	
RESEARCH WORK UNIT/PROJECT ABSTRACT CURRENT RESEARCH INFORMATION SYSTEM				DATE Jb DEC 1990	
PROBLEMS OF OLDER AMERICANS & RELATED RESEARCH				TERMINATION DATE 30 SEP 1990	
ADDITIONAL NO. 0133455		WORK UNIT/PROJECT NO. NYC-199441		REGIONAL PROJECT NO. 14853	
CONTRACT/GRANT/AGREEMENT NO. HATCH		FEDERAL AGENCY CSRS NY.C			
LOCATION CORNELL UNIVERSITY ITHACA NEW YORK		PERFORMING ORGANIZATION NUTRITIONAL SCIENCES			
SYNOPSIS/TITLE SOP D A					
NUTRITIONAL NEEDS ASSESSMENT OF ELDERLY, INDIGENT DIABETICS					

FISCAL YEAR	USDA APPN/ CSRS ADM	OTHER FEDERAL	NON FEDERAL	TOTAL	SYS
1989	\$3698	\$0	\$88929	\$92627	.1

OBJECTIVES:

Community surveys in New York State have shown that up to 25% of indigent, frail elderly are diabetic. Diabetic complications include blindness and amputations, and impose a need for frequent hospitalization and institutional care. Specific aims are to obtain select indicators of nutritional risk for elderly, indigent diabetics with/without these complications, and to determine whether community nutritional services can reduce their need for acute and long-term care.

APPROACH:

Investigations will be carried out in Upstate New York counties and in New York City. Research plans are to obtain and validate in Year 1 dietary, anthropometric, biochemical and prognostic indicators of nutritional status of diabetics who are blind or with vision and those who are/are not amputees. In Year 2, selected indicators will be used to make comparison of the nutritional status of indigent diabetics with/without complications, who live independently in the community, are housebound, or are in acute care hospitals or nursing homes. In Year 3, 50% of the sample population will receive special nutrition counselling. Comparison will be made of the prognostic effect of this intervention.

PROGRESS REPORT: 89/01 89/12

It has previously been shown that milk components evoke insulin release. Aims of a study now in progress have been to determine dietary and lifestyle risk factors for non-insulin dependent diabetes mellitus in a minority population, with particular focus on their consumption of milk. The study was conducted in 8 locations in East Harlem, with a sample population of elderly Hispanics and Blacks who obtain meals at community centers and senior housing sites. A dietary habits questionnaire was administered to all respondents. Capillary blood samples were collected for measurement of blood glucose, using the glucose oxidase method, and for measurement of glycosylated hemoglobin using affinity chromatography. Dietary data and information on glycemic control is available on 190 respondents. In this sample, only 22% reported being diabetics, but 33% were found to have biochemical evidence of diabetes. Milk intake was found to be low and mainly derived from milk that respondents added to their coffee. An inverse correlation was established between milk consumption and glycosylated hemoglobin levels. A 10-week intervention is planned, in which respondents will be randomly assigned to receive daily a carton of low fat milk or an isocaloric non-dairy beverage. During this period compliance with milk consumption will be monitored by measurement of erythrocyte glutathione reductase activity coefficients.

PUBLICATIONS: 00 ADDITIONAL PUBLICATIONS

NO PUBLICATIONS REPORTED THIS PERIOD.

AD-827 (1/88)		U.S. DEPARTMENT OF AGRICULTURE COOPERATIVE STATE RESEARCH SERVICE		CIRIS ID NO. J11920	
RESEARCH WORK UNIT/PROJECT ABSTRACT CURRENT RESEARCH INFORMATION SYSTEM				DATE 06 DEC 1990	
PROBLEMS OF OLDER AMERICANS & RELATED RESEARCH				START DATE 11 OCT 1983	
ACCOMPLISHMENT NO. 2091806		WORK UNIT/PROJECT NO. NYC-321413		TERMINATION DATE 01 OCT 1987	
LOCATION ITHACA		REGIONAL PROJECT NO. 14853		CONTRACT/GRANT/AGREEMENT NO. HATCH	
CORNELL UNIVERSITY		PERFORMING ORGANIZATION MURAN DEVEL & FAMILY STUDIES		AGENCY IDENT. CSRS NY-C	
INVESTIGATOR CORNELIUS S W					
TITLE EVERYDAY INTELLECTUAL ABILITIES IN YOUNGER AND OLDER ADULTS					

FISCAL YEAR	USDA APPN/ CSRS ADM	OTHER FEDERAL	NON FEDERAL	TOTAL	SYS
1989	\$6548	\$7	\$1984	\$8539	.0

OBJECTIVES:

The general objective is to examine differences between younger and older adults in everyday intellectual abilities of practical problem solving, practical adaptive behavior, and social competence. Three studies are proposed. The first study is designed to explore how adults conceptually appraise stressful situations and the conceptual dimensions used to evaluate them. The aim of the second study is to examine how adults conceptually classify different coping responses and their beliefs about what responses are most effective for resolving different types of situations. The purpose of the third study is to explore adults' advice-giving to another person in a stressful situation and the relation between past experience in an analogous situation and the quality of advice offered.

APPROACH:

For each study, samples of younger and older adults will be presented social-cognitive tasks appropriate to the specific aim. In studies 1 and 2, they will be asked to sort conceptually similar situations or responses together and to provide ratings of either situational characteristics or response effectiveness. In study 3, they will be asked to recall an experience analogous to a target situation, rate the personal experience on situational characteristics, and identify coping responses they would advise to resolve the target situation.

PROGRESS REPORT: 86/10 87/10

This project was conducted to examine everyday intellectual abilities in adulthood. In doing so, we have focused on both adults' self-conception of their abilities as well as their performance on newly constructed tasks designed to tap three specific components: everyday problem solving, adaptive behavior, and social competence. The results of these studies show contrasts between the developmental patterns for everyday abilities and academic abilities assessed by traditional intelligence tests. In general, there is an increase with age in both self-perceptions of everyday abilities and actual performance on everyday tasks. By contrast, performance on traditional tests declines (especially for abstract and logical reasoning abilities) or remains relatively stable (especially for verbal abilities). In addition, everyday intellectual abilities show low but positive correlations with traditional abilities. These findings support other research indicating the potential growth of cognitive skills for abilities that are exercised in everyday functioning and are consistent with theoretical models of adult intellectual change emphasizing both gains and losses in functioning. Besides the theoretical significance of this work, it has important practical implications and possible diagnostic applications in arenas such as mental health, business or industry, and social services.

PUBLICATIONS: 00 ADDITIONAL PUBLICATIONS

CORNELIUS, S.W., and CASPI, A. 1987. Everyday problem solving in adulthood and old age. *Psychology and Aging*, 2, 144-153.
CORNELIUS, S.W., and ROSE, J.M. 1987. Concepts of effective coping: Theme and variations. *Gerontologist*, 27 (October), 266.
CORNELIUS, S.W., KENNY, S., and CASPI, A. 1987. Academic and everyday intelligence in adulthood: Conceptions of self and ability tests. In J.D. Sinnott (Ed.), *Everyday problem solving: Theory and application*. New York: Praeger.

AD-607 (11-88)		U.S. DEPARTMENT OF AGRICULTURE COOPERATIVE STATE RESEARCH SERVICE		CRS ID NO. J11922	
RESEARCH WORK UNIT/PROJECT ABSTRACT CURRENT RESEARCH INFORMATION SYSTEM				DATE 06 DEC 1990	
PROBLEMS OF OLDER AMERICANS & RELATED RESEARCH				START DATE 01 AUG 1987	TERMINATION DATE 30 SEP 1990
ACCESSION NO. 2132539	WORK UNIT/PROJECT NO. NYC-322805	REGIONAL PROJECT NO.	CONTRACT/GRANT/AGREEMENT NO. HATCH	AGENCY REF. CSRS NY.C	
LOCATION CORNELL UNIVERSITY ITHACA NEW YORK 14853			PERFORMING ORGANIZATION CONSUMER ECONOMICS & HOUSING		
INVESTIGATOR HOGARTH, J. J.					
TITLE EARLY RETIREMENT INCENTIVE PROGRAMS AND RETIREMENT DECISION MAKING					

FISCAL YEAR	USDA APPN/ CSRS ADM	OTHER FEDERAL	NON FEDERAL	TOTAL	SYS
1989	87319	86713	822963	\$36995	.1

OBJECTIVES:

Calculate discount rates used by individuals in evaluating early retirement incentive offers. Explore methodologies for modeling acceptance behavior at an inflexion point in the pension benefit formula. Develop models to describe acceptance behaviors with regard to various forms of early retirement incentive programs.

APPROACH:

Econometric models will be developed using a data set collected from previous Hatch research project. Variables to be studied include a variety of socio-economic and psychological characteristics.

PROGRESS REPORT: 89/01 89/12

Beginning analysis of relationships between income, assets (level and portfolio), and expenditures. Data sets have been developed using data from Survey of Consumer Finances and Consumer Expenditure Survey. Currently in the process of exploring statistical data matching and modeling as techniques for merging data sets. Abstract for paper accepted for presentation at 1990 Southern Regional Family Economics Meeting. Abstracts for papers submitted to U.S. Census Annual Research Conference, American Council on Consumer Interests Second International Conference on Research in the Consumer Interest. Abstracts in process for American Statistical Association and Allied Social Sciences Association (economics) annual meetings.

PUBLICATIONS: 00 ADDITIONAL PUBLICATIONS

HOGARTH, J.M. 1989. "Models of Accepting an Early Retirement Incentive," *Lifestyles: Family and Economic Issues*, 10(1), 61-82.

HOGARTH, J.M. 1989. "Saving and Dissaving in Retirement," *Family Economics Review*, 2(2), 13-17.

HOGARTH, J.M. and MCGONIGAL, J.W. 1989. "New York Parents: A Model for Meeting Their Family Needs," *Human Ecology Forum*, 18(1), 5-8.

INADA, T. 1989. "The Effect of Point-of-Purchase Signs with Nutrition Information on Consumers' Purchasing Behavior," M.S. Thesis, Cornell University.

PAPPIDIS, M.R. 1989. "Family Influence on the Acquisition of Teen Financial Management Behaviors: A Preliminary Study Using Socialization Theory," M.S. Thesis, Cornell University.

If this information is reproduced, published, or quoted, credit must be given to the project leader and the organization conducting the research. For progress reports, it must be clearly stated that the information reflects only the results obtained during the period specified and final results are subject to completion of the investigation.

AD-687 (11/88)		U.S. DEPARTMENT OF AGRICULTURE COOPERATIVE STATE RESEARCH SERVICE		CNR 0100 J1322J	
RESEARCH WORK UNIT/PROJECT ABSTRACT				DATE 06 DEC 1990	
CURRENT RESEARCH INFORMATION SYSTEM				TERMINATION DATE 30 SEP 1990	
PROBLEMS OF OLDER AMERICANS & RELATED RESEARCH				START DATE 01 MAR 1986	
ACCESSION NO. 009d006		WORK UNIT/PROJECT NO. NYC-122431		CONTRACT/GRANT/AGREEMENT NO. MATCH	
REGIONAL PROJECT NO.		AGENCY IDENT.		CSRS NY.C	
LOCATION CORNELL UNIVERSITY ITHACA NEW YORK 14853		PERFORMING ORGANIZATION CONSUMER ECONOMICS & HOUSING			
SYNOPSIS/TITLE RESCHOVSKY, J.D. CAUSES AND CONSEQUENCES OF RESIDENTIAL IMMOBILITY AMONG THE ELDERLY IN URBAN AND RURAL AREAS					

FISCAL YEAR	USDA APPR/ CSRS ADM	OTHER FEDERAL	NON FEDERAL	TOTAL	SYS
1989	\$7994	\$0	\$68618	\$76612	.6

OBJECTIVES:

The research will investigate the causes and consequences of the low residential mobility among the elderly in both urban and rural areas. This immobility is hypothesized to result from obstacles to moving, which lock the household into homes inappropriate to current needs and preferences. The specific objectives are to determine the reasons for the elderly's immobility, contrast differences between urban and rural households and identify vulnerable subgroups, and measure losses in welfare and financial stress for households which appear to be locked-into current housing.

APPROACH:

To estimate an economic model of the decision to move on an existing national sample of households. The model estimates the benefits and costs to moving each household faces. Multi-nomial logit is used as an estimation technique. Reasons for the relative immobility of the elderly will be inferred from the results. Subgroups most likely to be locked into current housing will be identified. Financial stress will be determined by measure of the housing cost burden. Public policy implications will be drawn.

PROGRESS REPORT: 89/01 89/12

A paper entitled "Residential Immobility of the Elderly: An Empirical Investigation," was revised and submitted for publication in the *AREUEA* Journal. The paper received favorable reviews and is being revised for a final publication decision. A paper entitled "Adaptations for Independent Living by Older Frail Households," was completed and submitted for publication to the *Gerontologist*. Research on decisions by the frail elderly to move or make in-place adjustments is at preliminary stages. Research on homeowner demand for home upkeep and improvements was conducted. Behavior of urban and rural homeowners were found to significantly differ. Results from this work were reported in a paper entitled "An Empirical Investigation into Homeowner Demand for Home Upkeep and Improvement," which was delivered at the Allied Social Science Association meetings in Atlanta in December. Additional empirical work has been conducted that will be used for a paper that focuses on home repair by elderly homeowners. Empirical work continued on a study of the determinants of quality of board and care homes in urban and rural areas. Finally, revisions were made to papers on teenage contraceptive choice and emergency food relief. These were submitted to journals for publication review.

PUBLICATIONS: 00 ADDITIONAL PUBLICATIONS

RESCHOVSKY, J.D. 1989. "Present & Future Roles of HUD Programs in Board & Care Financing," in *Preserving Independence, Supporting Needs, The Role of Board & Care Homes*, Washington, D.C.: Amer. Assoc. of Retired Persons, 93-108.
RESCHOVSKY, J.D. & NEWMAN, S.J. 1989. "Adaptations for Independent Living by Older Frail Households," Dept. of Cons. Econ. & Housing Research Paper RP89-8, Cornell University.
RESCHOVSKY, J.D. 1989. "An Empirical Investigation into Homeowner Demand for Home Upkeep and Improvements," Dept. of Cons. Econ. & Housing Research Paper RP89-9, Cornell University.
RESCHOVSKY, J.D. 1989. "The Market for Soup Kitchen and Food Pantry Meals: An Empirical Study," Dept. of Cons. Econ. & Housing Research Paper RP89-10, Cornell University.

AD-887 (11/88)		U.S. DEPARTMENT OF AGRICULTURE COOPERATIVE STATE RESEARCH SERVICE		CRS # NO. J11123	
RESEARCH WORK UNIT/PROJECT ABSTRACT CURRENT RESEARCH INFORMATION SYSTEM				DATE 26 DEC 1990	
PROBLEMS OF OLDER AMERICANS & RELATED RESEARCH				TERMINATION DATE 30 SEP 1991	
ACCESSION NO. 2133937	WORK UNIT/PROJECT NO. NYC-325403	REGIONAL PROJECT NO.	CONTRACT/GRANT/AGREEMENT NO. HATCH	AGENCY ORIGIN CSRS NY.C	
LOCATION CORNELL UNIVERSITY ITHACA NEW YORK 14853		PERFORMING ORGANIZATION HUMAN SERVICE STUDIES			
INVESTIGATORS BUCHANAN, R.					
TITLE THE UTILIZATION OF HEALTH CARE SERVICES BY THE ELDERLY: RURAL-URBAN COMPARISONS					
FISCAL YEAR 1989		USDA APPN/ CSRS ADN \$10595	OTHER FEDERAL \$0	NON FEDERAL \$6120	TOTAL \$16715
					SYS .0

OBJECTIVES:
The purpose of this research is to identify and analyze the relationships between informal and formal health services utilized by the elderly living in rural America and to compare this utilization with the elderly living in urban areas. In addition, the health services received by the elderly in rural Mississippi will be contrasted to the formal and informal services received by the elderly in rural New York to discover any differences in the availability of informal care, the type of help given, and the adequacy of supply.

APPROACH:
The research will utilize the data on aging and health utilization available from the National Center for Health Services Research to study the formal and informal care provided to the elderly in rural and urban America. Fifty case studies in rural New York and fifty case studies in rural Mississippi will generate the additional data necessary for the project.

PROGRESS REPORT: 89/01 89/12
The preliminary data collection process began in Mississippi during the summer, 1989 on the care needs of the rural elderly. In addition, surveys of the state Medicaid programs collected data on nursing home and physician care coverage. The results of the Medicaid surveys on nursing home care, hospital care, physician care and eligibility were summarized in reports and mailed to the state Medicaid programs.

PUBLICATIONS: 00 ADDITIONAL PUBLICATIONS
THE DATA COLLECTED IN THE MEDICAID SURVEYS RESULTED IN 6 MANUSCRIPTS SUBMITTED FOR PUBLICATION REVIEW. THE PEER REVIEW PROCESS IS CONTINUING ON FIVE STUDIES. ONE STUDY HAS BEEN PUBLISHED. 1989.
BUCHANAN, R. and BECK, D. "MEDICAID COVERAGE OF PHYSICIAN CARE" ADMINISTRATION OF THE REIMBURSEMENT PROCESS. THE JOURNAL OF AMBULATORY CARE MANAGEMENT. 12: 50-58. 1989.

If this information is reproduced, published, or quoted, credit must be given to the project leader and the organization conducting the research. For progress reports, it must be clearly stated that the information reflects only the results obtained during the period specified and final results are subject to completion of the investigation.

AD-87 (11/82)		U.S. DEPARTMENT OF AGRICULTURE COOPERATIVE STATE RESEARCH SERVICE		CERS ID NO. J3320	
RESEARCH WORK UNIT/PROJECT ABSTRACT				DATE 26 DEC 1990	
CURRENT RESEARCH INFORMATION SYSTEM				TERMINATION DATE 30 SEP 1991	
PROBLEMS OF OLDER AMERICANS & RELATED RESEARCH				START DATE 01 NOV 1987	
ACCESSION NO. 0133595	WORK UNIT/PROJECT NO. NYC-199405	REGIONAL PROJECT NO.	CONTRACT/GRANT/AGREEMENT NO. HATCH	AGENCY IDBY CSRS NY-C	
LOCATION CORNELL UNIVERSITY ITHACA NEW YORK 14853			PERFORMING ORGANIZATION NUTRITIONAL SCIENCES		
INVESTIGATOR CAMPBELL C C					
TITLE THE INFLUENCE OF SOCIAL NETWORKS ON THE FOOD-RELATED PRACTICES OF OLDER ADULTS.					

FISCAL YEAR	USDA APPX/ CSPS ADM	OTHER FEDERAL	NON FEDERAL	TOTAL	SYS
1989	\$11027	\$10	\$9980	\$21017	.1

OBJECTIVES:

The overall goal of this research is to determine the direct and indirect ways in which an older adult's social network affects his or her food-related practices. The primary objective of this project is to develop appropriate methodologies for older adults with which to accomplish this goal.

APPROACH:

Sixty women between 60 and 75 years old, either living alone or with a spouse, will be contacted through private physicians' offices. Each woman will be interviewed three times with three telephone follow-up calls to determine their food-related practices (nutrient intake, food consumption pattern, food security, food acquisition and food strain), their social networks (interactions, participants and overall characteristics), their health status, income and non-discretionary expenses, and predisposition to mobilize support. Analysis will be done to identify the most pertinent characteristics of the social networks and food related practices and to test the plausibility of the conceptual framework for the study.

PROGRESS REPORT: 89/01 89/12

The objective of this small, inductive, hypothesis generating study was to identify the dimensions of the social networks, foodways, and potential mediating factors (health, finances, and predisposition to mobilize support) that are necessary to study in order to determine the direct (tangible assistance) and indirect (psychological well-being) ways that social networks affect food-related practices. Three semi-structured interviews with telephone follow-up were held with 36 older adults from 29 households. The participants ranged in age (62-89); income (11 below, 14 above poverty, 4 unstated); health status and housing situations (although all were living independently). Both qualitative and simple quantitative analysis techniques were used. Initial results include: age differences were not informative in this sample; fat intake was more related psycho-social variables than nutrient adequacy measures; the perceived effort and the pleasure derived from food routines were related to nutrient adequacy measures; of the social network variables the perceived quality of social relations and the number of relations actually used (versus those available to be used) were the most informative; degree of changes in health status, residence and relationships was a significant dimension of contrast among the sample. Analysis of the social network variables and their indirect relationship with the nutrition variables is ongoing.

PUBLICATIONS: 00 ADDITIONAL PUBLICATIONS
NO PUBLICATIONS REPORTED THIS PERIOD.

AD-887 (7-88)		U.S. DEPARTMENT OF AGRICULTURE COOPERATIVE STATE RESEARCH SERVICE		CRS ID NO 733229	
RESEARCH WORK UNIT/PROJECT ABSTRACT CURRENT RESEARCH INFORMATION SYSTEM				DATE 30 DEC 1991	
PROJECTS OF COLORED AMERICANS & RELATED RESEARCH				START DATE 01 MAR 1989	
ACCESSION NO. 0117209				TERMINATION DATE 30 OCT 1991	
WORK UNIT/PROJECT NO. 08002944		REGIONAL PROJECT NO. 43210		CONTRACT/GRANT/AGREEMENT NO. HATCH	
LOCATION OHIO STATE UNIV COLUMBUS OHIO		PERFORMING ORGANIZATION FAMILY RESOURCE MANAGEMENT		AGENCY IDENT CSRS OBO	
INVESTIGATOR BURNS S A					
TITLE SUFFICIENCY OF RETIREMENT FUNDS OF FARM OPERATORS AND OTHER SELF-EMPLOYED WORKERS					
FISCAL YEAR 1989		USDA APPN/ CSRS ADM \$3930	OTHER FEDERAL \$0	NON FEDERAL \$7853	TOTAL \$10883
					SYS .2

OBJECTIVES:

Estimate sufficiency of retirement funds for self-employed workers, including Ohio farmers, U.S. farmers, and self-employed business people. Make comparisons of groups of self-employed workers and farm operators' retirement funds. Test socio-demographic variables for ability to predict sufficiency of retirement funds.

APPROACH:

Use respondents from three data sets. One is nationally representative, and two are studies of Ohio farm operators and families. Calculate a needed savings ratio as a percent of present and future income. Analysis of variance and multiple regression analysis will be used.

PROGRESS REPORT: 89/01 89/12

Using data from the 1986 and 1987 waves of the Ohio Farm Household Longitudinal Study and the Survey of Consumer Finances, 1983 comparisons between Ohio farmers and a national sample of farmers as well as other self-employed respondents has been completed. Preliminary analyses suggest that non-farm self-employed workers are younger than farmers, have advanced to higher education levels and have a different distribution of tangible assets than farmers. Household financial data vary between the groups.

PUBLICATIONS: 00 ADDITIONAL PUBLICATIONS
NO PUBLICATIONS REPORTED THIS PERIOD.

AD-82 (11-82)		U.S. DEPARTMENT OF AGRICULTURE COOPERATIVE STATE RESEARCH SERVICE		CRS G NO. 11112	
RESEARCH WORK UNIT/PROJECT ABSTRACT				DATE 28 DEC 1992	
CURRENT RESEARCH INFORMATION SYSTEM				TERMINATION DATE	
PROBLEMS OF OLDER AMERICANS & RELATED RESEARCH				START DATE 01 OCT 1980	
ACCESSION NO. J37557		HUMAN UNIT/PROJECT NO. QPR02341		CONTRACT/GRANT/AGREEMENT NO. W 00143	
HATCH		HATCH		AGENCY SGRY CSRS ORR	
LOCATION OREGON STATE UNIV CORVALLIS		DEPT/OWN OREGON		PERFORMING ORGANIZATION HOME ECONOMICS FOOD & NUTRI	
97331		97331			
AUTHOR KLEIN J E		TITLE LEKLEN J E			
NUTRIENT BIOAVAILABILITY - A KEY TO HUMAN NUTRITION					
FISCAL YEAR 1989		USDA APPW/ CSRS ADM \$130560		OTHER FEDERAL \$0	
		NON FEDERAL \$25561		TOTAL \$156121	
				SYS .9	

OBJECTIVES:

Determine the bioavailability of key water soluble vitamins (B-6, folic acid, pantothenic acid, thiamine) and minerals (copper, iron, selenium, zinc, and calcium) of plant and animal derived foods in humans. Develop methods for determining bioavailability of key nutrients in animal models and in vitro systems and apply/relate them to bioavailability studies with human subjects.

APPROACH:

Specimens collected from a human metabolic study conducted at Oregon will be used to determine the bioavailability of several water-soluble vitamins and trace elements from two different diets. Animal products will supply half of the protein in one diet (animal diet) and plant products will supply half of the protein in the other diet (plant diet). The remainder of each diet, which will be kept constant, will be composed of other plant and animal products. Ten men (20 to 35 years of age) will serve as subjects. Aliquots of diet, urine, feces and blood will be sent to other stations. Oregon will also determine if the level of glycosylated vitamin B-6 in foods can be used as an in vitro technique to determine vitamin B-6 bioavailability in humans. Levels of glycosylated vitamin B-6 will be determined in foods commonly eaten in the U.S.

PROGRESS REPORT: 89/01 89/12

Two aspects of requirements of B-6 have been investigated. The effect of pyridoxine (PN) supplementation on the utilization of a plant-based, low-protein diet was assessed. Following two days of negligible protein intake, 4 young adults were fed a constant diet containing 4.75 (women) or 4.56 (men) g N and 1 mg B-6 for 19 d. On d 13 to 19 the subjects received a supplement of 50-mg PN HCl daily. N balance was negative & was not affected by PN. Apparent protein digestibility was low, ranging from 50 to 83%. High fecal N contributed to the negative N balance. Plasma and urinary urea N, two other measurements of protein utilization, also failed to show any beneficial effect of PN on plant protein utilization. The Vitamin B-6 (B-6) status of 18 adult (male and female) controls and 18 adults (male and female) with either Type I or Type II diabetes was evaluated by measuring blood levels of the coenzyme form of the vitamin, pyridoxal 5'-phosphate (PLP) and urinary excretion of 4-pyridoxic acid (4PA), the major breakdown form of B-6. In addition, B-6 intake was estimated from 3 day records of weighed food intake. Females with diabetes had lower blood levels of PLP than female controls. Blood levels of PLP in males with diabetes and controls were similar although the intake of B-6 was higher in males with diabetes. 4-PA excretion as a % of B-6 intake for persons with Type I diabetes was higher (84%) than for controls (60%).

PUBLICATIONS: 00 ADDITIONAL PUBLICATIONS

MANOJE, S.S., VAUGHAN, L.A., CARROLL, S.S., LEKLEN, J.E. Plasma pyridoxal 5'-phosphate concentration and dietary vitamin B-6 intake in free-living, low income elderly. Am. J. Clin. Nutr. 50:339-345, 1989.
LEKLEN, J.E. and HOLLENBECK, C.B. Acute ingestion of glucose decreases plasma pyridoxal 5'-phosphate and total vitamin B-6 concentration. Am. J. Clin. Nutr. (accepted for publication).
CHO, Y.O. and LEKLEN, J.E. In vivo evidence for the vitamin B-6 requirement in carnitine synthesis. J. Nutr. (accepted for publication).
LEKLEN, J. Changes in plasma pyridoxal 5'-phosphate after a carbohydrate load in carbohydrate cravers and non-cravers. FASEB J. 3:A455, 1989.
PRINCE, A. and LEKLEN, J. Vitamin B-6 status of school-aged children with phenylketonuria. FASEB J. 3:A455, 1989.
HAPDIX, K., FIDDLINGTON, J. and LEKLEN, J. Increased vitamin B-6 content in ripening bananas. FASEB J. 3:A668, 1989.
BILLS, N. and LEKLEN, J. Correlation of human vitamin B-6 bioavailability data for 10 plant foods with in vitro vitamin B-6 measures. FASEB J. 3:A455, 1989.

U.S. DEPARTMENT OF AGRICULTURE COOPERATIVE STATE RESEARCH SERVICE				CRR # NO. 213720	
RESEARCH WORK UNIT/PROJECT ABSTRACT CURRENT RESEARCH INFORMATION SYSTEM				DATE 26 DEC 1990	
PROJECTS OF OLDER AMERICANS & RELATED RESEARCH				START DATE 01 OCT 1986	
ACCESSION NO. WORK UNIT/PROJECT NO. REGIONAL PROJECT NO. CONTRACT/GRANT/AGREEMENT NO.				TERMINATION DATE 10 SEP 1991	
7132739	05200715	W 00176	HATCH	AGENCY IDENT CSRS ORE	
LOCATION OREGON STATE UNIV COTVALLIS			PERFORMING ORGANIZATION HOBZ ECONOMICS		
UNIVERSITY/STATE OR			97331		
BRANDT J					
TITLE HOUSING AND LOCATIONAL DECISIONS OF THE MATURING POPULATION: OPPORTUNITIES FOR THE WESTERN REGION					

FISCAL YEAR	USDA APPN/ CSRS ADM	OTHER FEDERAL	NON FEDERAL	TOTAL	SYS
1989	\$2131	\$0	\$182	\$2313	.0

OBJECTIVES:

Develop a profile of selected aging populations including those who relocate make seasonal moves, or age-in-place; Identify considerations relevant to residential characteristics, support services, and finances important to informed housing decisions; Compare rural and urban residents as to their mid- and later-life housing and locational decisions, especially rural directed relocation; Develop decision making criteria and strategies for family aid- and later-life housing and locational choices and compare the aging population's housing and locational needs and choices and rural communities' views and policies.

APPROACH:

Sampling frames will be developed to represent rural and urban populations for random sampling in counties with high portions of the selected populations; Descriptive and inferential analyses will be used to examine variables and the relationships in actual and projected housing and locational decisions of rural and urban residents; Principal investigators will work with Cooperative Extension personnel to develop & refine decision strategies for dissemination to target audiences with an Extension/research workshop held to interpret and apply the findings to program plans and efforts; Congruity between the considerations identified by householders and attitudes of community and county governments view of the desirability and feasibility of housing as aging population is an effort to facilitate rural revitalization will be tested.

PROGRESS REPORT: 89/01 89/12

A majority of respondents over 54 years of age in the college town sampled already started to plan for retirement and have positive feelings about it. Many have made extensive plans including where to retire and what resources they will use for retirement. The majority of the respondents in this group plan to stay in the same city during retirement. This city will meet their preferences for living in an area with the largest city between 10,000 and 150,000 residents, lots of trees and foliage, library facilities, and medical facilities including medical specialists and a hospital where general surgery is done. Many have multiple sources of retirement income available to them. Considering that the State retirement plan and social security are based on annual incomes over \$35,000, these resources will probably allow them to do this, as they prefer. About half of the respondents over 54 feel it would not be difficult to move to a home more suited to retirement living; however, they feel that it would be difficult to move themselves into a care facility or to move in with someone they do not know well. If they should decide to move to a retirement facility, these resources might allow them to manage the cost well. However, they would prefer to own single family detached houses, with second choice preference being to own townhouses, in neighborhoods with residents of all ages.

PUBLICATIONS: 00 ADDITIONAL PUBLICATIONS

BRANDT, J.A. (1989). Housing and community preferences: Will they change in retirement. Outlook '89: Proceedings of the 65th Agricultural Outlook Conference, U.S. Dept. of Agriculture, Washington, DC: Nov 29-Dec 1, 1988. pp. 508-518.

BRANDT, J.A. (1989). Housing and community preferences: Will they change in retirement. Family Economics Review, 2(2):7-11.

AD-887 (11-88)		U.S. DEPARTMENT OF AGRICULTURE COOPERATIVE STATE RESEARCH SERVICE		CSRS ID NO. 032220	
RESEARCH WORK UNIT/PROJECT ABSTRACT CURRENT RESEARCH INFORMATION SYSTEM				DATE 06 DEC 1990	
RESEARCH WORK UNIT/PROJECT ABSTRACT CURRENT RESEARCH INFORMATION SYSTEM				START DATE 01 OCT 1983	
RESEARCH WORK UNIT/PROJECT ABSTRACT CURRENT RESEARCH INFORMATION SYSTEM				TERMINATION DATE 30 SEP 1989	
ACCESSION NO. 7391537	WORK UNIT/PROJECT NO. PEN02710	REGIONAL PROJECT NO. NE 00147	CONTRACT/GRANT/AGREEMENT NO. HATCH		AGENCY SBNY. CSRS PEN
LOCATION PENNSYLVANIA STATE UNIVERSITY UNIVERSITY PARK PENNSYLVANIA 16802			PERFORMING ORGANIZATION COLLEGE OF HUMAN DEVELOPMENT		
INVESTIGATOR AUTHOR H A SMICKLAS WRIGHT H					
TITLE IMPROVING SENSITIVITY OF METHODS TO ASSESS NUTRIENT INTAKE AND TO PREDICT NUTRITIONAL RISK					
FISCAL YEAR 1989	USDA APPN/ CSRS ADS \$17796	OTHER FEDERAL \$0	NON FEDERAL \$2523	TOTAL \$20319	SYS .1

OBJECTIVES:

Determine practical, reliable, and cost effective methods of obtaining and evaluating dietary data; improve the predictability of nutritional risk.

APPROACH:

Establish standardized protocol for portion estimations and identify sources of variance. Use national food consumption data to develop and validate a food frequency questionnaire. Develop alternate methods of food intake assessment, such as frequencies and indicators/scores, to improve reliability of data collection for the traditional dietary standard among various age groups and sex.

PROGRESS REPORT: 83/10 89/09

PA directed studies to determine subjects' abilities in estimating food portion sized. Food & beverage portions were estimated with & without two portion estimation aids--measuring utensils & photographs. College students & older adults made similar errors in portion estimates. Measuring utensils were somewhat better than pictures in reducing errors or estimation. Seats, however, were poorly estimated with & without aids. PA was also involved in studies designed to assess reliability & validity of Food Frequency Questionnaires (FFQ) in elderly persons. A sample of men 65 years & older completed shorter & longer forms of a FFQ. Mean nutrient intakes were similar but sufficient was time served in shorter version to recommend it for future studies. A sample of older women completed FFQ by self-administration (SA) and interview (I). Mean nutrient intakes were higher by SA. Many SA questionnaires were of poor quality. These data recommend that FFQ in older women are best administered by interview.

PUBLICATIONS:

00 ADDITIONAL PUBLICATIONS

RICHARDS, R.E. 1989. The Iron Status of Elderly Home-Delivered Meal Recipients. M.S. Thesis.

IRVIN, B., SMICKLAS-WRIGHT, H., FOSMIRE, G. 1989. Intraindividual variability in zinc intakes of elderly women. Nutrition Research, 9:613-624.

LAKE, A.J., GUTHRIE, H.A., SMICKLAS-WRIGHT, H. 1989. Accuracy of food portion estimation by overweight and normal weight subjects. Journal of The American Dietetic Association, 89:962-69.

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AD-807 (11-88)		U.S. DEPARTMENT OF AGRICULTURE COOPERATIVE STATE RESEARCH SERVICE		CARS ID NO. J33223	
RESEARCH WORK UNIT/PROJECT ABSTRACT CURRENT RESEARCH INFORMATION SYSTEM				DATE 01 MAR 1986	
PROBLEMS OF OLDER AMERICANS & RELATED RESEARCH				TERMINATION DATE 31 DEC 1989	
ACCESSION NO. 0793115	WORK UNIT/PROJECT NO. PEN02862	REGIONAL PROJECT NO.	CONTRACT/GRANT/AGREEMENT NO. HATCH	AGENCY GIFT CSRS PEN	
LOCATION PENNSYLVANIA STATE UNIVERSITY UNIVERSITY PARK PENNSYLVANIA 16802			PERFORMING ORGANIZATION AGRI ECONOMICS & RURAL SOCIOL		
INVESTIGATORS CRAWFORD C O					
TITLE PREVENTIVE HEALTH BEHAVIOR, HEALTH STATUS AND SOCIAL SUPPORT AMONG THREE AGE GROUPINGS OF ADULTS					

FISCAL YEAR	USDA APPR/ CSRS ADM	OTHER FEDERAL	NON FEDERAL	TOTAL	SYS
1989	\$19319	\$0	\$35291	\$54610	.5

OBJECTIVES:

To describe and analyze differences in selected preventive health behaviors for three age groupings of adults in rural and urban communities.

APPROACH:

Use data from two previous experiment station projects and data previously collected by the Pennsylvania Department of Health, and gather limited additional data. Although the previous experiment station projects and the Pennsylvania Department of Health did not relate directly to the objectives of this project, a portion of the data collected can be used. Limited additional data will be gathered as needed to meet project objectives.

PROGRESS REPORT: 86/03 89/12

Preventive health or healthy behaviors were defined as seat belt use, exercise, smoking cessation, prudent dietary patterns, and hypertension control. Very few significant differences in the practice of these were found when residence and gender comparisons were made. Seat belt use was higher among rural adults. In terms of social support for practice or change in practice, older adults reported significantly less support than younger adults for dietary change and seat belt use while females received greater support for exercise than did males. Regarding specific sources of support, family members were found more important for rural adults while friends were more important for their urban counterparts. Females were more likely than males to receive support from daughters and received more support from daughters than from sons. In other analyses, few differences were found between rural and urban women with regard to the practice of health behaviors and indicators of well being. Another phase of this project was completion of a bulletin from a regional research project covering help older persons received with four tasks and their housing.

PUBLICATIONS:

- 00 ADDITIONAL PUBLICATIONS
- CRAWFORD, C.O. 1987. Introduction. In Crawford, C.O. (ed.), An Examination of Selected Dimensions of Independent Living Among 900 Older Persons. PA Agr. Sta. Bull. No. 864, pp. 1-4.
- CRAWFORD, C.O. 1987. Methods. In Crawford, C.O. (ed.), An Examination of Selected Dimensions of Independent Living Among 900 Older Persons. PA Agr. Sta. Bull. No. 864, pp. 5-8.
- CRAWFORD, C.O. 1987. Analysis. In Crawford, C.O. (ed.), An Examination of Selected Dimensions of Independent Living Among 900 Older Persons. PA Agr. Sta. Bull. No. 864, p. 9.
- CRAWFORD, C.O. 1987. Help with Personal Health Tasks. In Crawford, C.O. (ed.), An Examination of Selected Dimensions of Independent Living Among 900 Older Persons. PA Agr. Sta. Bull. No. 864, pp. 43-48.
- CRAWFORD, C.O. 1987. Health Status. In Crawford, C.O. (ed.), An Examination of Selected Dimensions of Independent Living Among 900 Older Persons. PA Agr. Sta. Bull. No. 864, pp. 70-76.
- WARLAND, R.H., CRAWFORD, C.O., GOODFELLOW, H. 1987. Stress, Coping and Confidants(es). In Crawford, C.O. (ed.), An Examination of Selected Dimensions of Independent Living Among 900 Older Persons. PA Agr. Sta. Bull. No. 864, pp. 77-81.
- MANFIELD, P.K., PRESTON, D.B., CRAWFORD, C.O. 1988. Rural-Urban Differences in.

AD-387 (11-82)		U.S. DEPARTMENT OF AGRICULTURE COOPERATIVE STATE RESEARCH SERVICE		CRS G NO 23322	
RESEARCH WORK UNIT/PROJECT ABSTRACT CURRENT RESEARCH INFORMATION SYSTEM				DATE 01 OCT 1986	
PROBLEMS OF OLDER AMERICANS & RELATED RESEARCH				TERMINATION DATE 30 SEP 1991	
ACCESSION NO. 0093757	WORK UNIT/PROJECT NO. PEW02864	REGIONAL PROJECT NO. NE 00141	CONTRACT/GRANT/AGREEMENT NO. HATCH	AGENCY ORGT. CSRS PEN	
LOCATION PENNSYLVANIA STATE UNIVERSITY UNIVERSITY PARK PENNSYLVANIA 16802			PERFORMING ORGANIZATION AGEI ECONOMICS & RURAL SOCIOL		
INVESTIGATOR HEASLEY D A					
FUNDING NORTHEAST REGIONAL CENTER FOR RURAL DEVELOPMENT RESEARCH					

FISCAL YEAR	USDA APPN/ CSRS ADM	OTHER FEDERAL	NON FEDERAL	TOTAL	SYS
1989	\$37965	\$0	\$5016	\$42981	.2

OBJECTIVES:

Conduct rural development research in the areas of rural people and communities, economic development, local government finance, community services, natural resources and environment, and rural values and social change; conduct evaluations of Center funded research projects.

APPROACH:

Through the Center Director, organize and conduct research activities which have been approved by the Center Board of Directors. Identify researchers with the interest and expertise needed to plan a specific activity. Develop priorities and implement research through appropriate requests for proposals, evaluation procedures, and award agreements. Coordinate research and extension functions of the Center.

PROGRESS REPORT: 89/01 90/12

An ad-hoc committee of thirteen held two meetings, one in State College, Pennsylvania, and one in Pittsburgh, Pennsylvania, to outline the key rural development issues for the twelve states and the District of Columbia. The key goal of this committee is to identify key issues and to formulate agendas to achieve these goals. Four research projects were funded: (1) Labor Resource Constraints on Technological Innovations by Rural Businesses; (2) Identify the Population of Manufacturing Firms in Parts of Pennsylvania and New York; (3) A Market Area Analysis for New England; (4) Impacts of Retirement Immigration on the Provision of Services for the Elderly in the Nonmetropolitan Northeast.

PUBLICATIONS: 00 ADDITIONAL PUBLICATIONS

MATERN, P. (editor). 1989. The NETWORK Northeast Regional Center for Rural Development Volume 5, Issue 1 (January)
PARSONS, J. (editor). 1989. The NETWORK Northeast Regional Center for Rural Development Volume 5, Issues 2-4 (April, July, October)
FAVERO, P., HEASLEY, D. 1989. Cooperative Extension and New Alliances for Rural Economic Development: Five Case Studies Northeast Regional Center for Rural Development publication #58
FRENEY, M., MILLAR, P. 1989. Community/Family Leadership Evaluation Project NERCSO publication #57
YOUNG, S., FRANCIS, J. 1989. Who Helps Small Manufacturing Firms Get Started. Rural Development Perspectives, USDA/ERS Volume 6, Issue 1 (October 1989) Page 21.

If this information is reproduced, published, or quoted, credit must be given to the project leader and the organization conducting the research. For progress reports, it must be clearly stated that the information reflects only the results obtained during the period specified and final results are subject to completion of the investigations.

ECONOMIC RESEARCH SERVICE (ERS)

RESEARCH RELATED TO PROBLEMS OF OLDER AMERICANS

1. Robert Hoppe, ERS economist in the Agriculture and Rural Economy Division, conducted research on "The Elderly and their Sources of Income, Implications for Rural Development." Using U.S. Census data from the Survey of Income and Program Participation, Mr. Hoppe plans to establish his research as a *Rural Development Research Report* and in the ERS publication called *Rural Development Perspectives*. Their research examines whether attracting older immigrants is a way of stimulating local economies.

2. Richard Reeder, ERS economist, working in conjunction with Nina Glasgow at Cornell University under a \$34,000 cooperative research agreement, has produced a study entitled "Economic Development Consequences of Elderly Population Growth in Nonmetro Counties." The study analyzes retirement counties (those with a high level of immigration of the elderly) to assess the economic impact on: employment, per capita income, and the public sector (taxes and local government spending on services like health and hospitals, highways, and utilities).

Three articles have resulted thus far from the research conducted, which were published in: *Rural Development Perspectives*; *The Journal of Applied Gerontology*; and *Journal of the Community Development Society*.

3. Calvin Beale, ERS economist, working with Glenn Fuguitt of the University of Wisconsin under a cooperative research agreement of \$9,000, produced research which partially focuses on older Americans. The study on Rural Population Change dealt with U.S. counties by types, of which retirement counties were one type.

An article based on the study was published in *Rural Development Perspectives* by ERS under the following title: "Decade of Pessimistic Nonmetro Population Trends Ends on an Optimistic Note."

EXTENSION SERVICE AND STATE COOPERATIVE EXTENSION SERVICES

IMPACT THE AGING

The staff and volunteers in the Extension System in all States, the trust territories and the District of Columbia in the 3,100 county offices, 73 central offices and the national office have increased their educational program outreach to the Aging. Targeted audiences have been adult children of aging parents, paid volunteers, and family caregivers of the frail elderly, other agency staffs, and midlife adults. Program focus varied according to the interests and needs of local clientele. However, many sessions were conducted to teach life skills that empower older persons to be in control of their lives and to make wise decisions.

NETWORKING with agencies and organizations is evident throughout the Extension System. Significant coordinated projects have been conducted with national, State, and local staffs or volunteers in senior centers, AARP, Easter Seal societies, mental health centers, Public Health Service, State and area agencies on Aging, American Red Cross, Hospitals, nursing homes, Indian Health services, and local and State officials.

ALABAMA developed a 40-hour "Home Health Care Training Course Internship (HCC)" to prepare participants to care for family members and others for home care provider employment. In 1990, 33 counties sponsored HCC for 228 participants. Of this number, 181 returned a mailed survey and 22 percent were employed companions and others were volunteer companions. Some topics that were rated most helpful were infection control, roles and responsibilities of companions, myths and realities of the aging process and nutrition. HCC was a 40-hour course that included a 10-hour internship in nursing homes or home health or public health agencies. HCC was coordinated by the Extension home economists who were assisted by health and social work professionals from hospitals, nursing homes, and public health as well as Red Cross volunteers and university faculty. A 3-day workshop "Make the Older Years Golden Years" was conducted to provide information on life-strengthening skills to address needs that were identified by five elderly focus groups in a tri-county area. The Alabama Commissioner on Aging, the Director of the Department of Public Health, staff of the State Vocational Rehabilitation Services, the State Insurance Commissioner and State Extension specialists addressed topics such as long-term health care and insurance options, diet and exercise, tax and legal options, and volunteering to meet community needs. The 214 participants evaluated this pilot effort that is being revised and packaged for replication in other parts of the State.

ARIZONA continues to provide educational resources and workshops for older persons. "Analyzing Long-Term Care Insurance" is a comprehensive educational

program for use by volunteers or professionals to teach older people how to analyze a policy and to aid in selecting long-term care insurance. Another teaching guide addresses critical legal issues such as "Durable Power of Attorney, Living Wills, and Medical Power of Attorney."

ARKANSAS has for the third year conducted the Volunteer Information Provider Program (VIPP) to improve the quality of caregiving and to reduce the economic impact of health-care cost. In 1990, 226 new caregivers received information from the VIPP volunteers on communication skills, stress reduction, personal care and on services and community resources available and ways to access them. A total of 2,553 caregivers have benefited from VIPP to date. "Nutrition and Food Selection" programs were conducted by home economists for 1,500 older people who as a result are eating a greater variety of foods including those that are lower in fat and sugar. Both men and women attended 1- to 5-hour sessions on "What a Spouse Should Know." The programs included information on important family papers, credit identity and credit management, estate planning and insurance needs. "A House for All Your Life" was attended by 631 people who learned ways to adapt their homes for more independent living. Fifteen nursing home activities directors from four counties participated in an Extension workshop on inexpensive leisure-time projects for nursing home residents. A four-part series on financial management was conducted in six counties for 735 elders. As a result, 64 women established credit in their own names, 261 updated a record of important papers, 76 updated their wills and estate plans and 252 prepared a household inventory. "Financial Management Seminars" were conducted for 25 Northeast Arkansas Area Agency on Aging staff and volunteers. One hundred and eighty women in one county participated in an AARP and extension cosponsored program on "Financial Management."

A FLORIDA Extension home economist provided 12 hours of training for 46 respite workers who were subcontracted to the Upjohn Health Care Services by the County Senior Services. In another program, 30-hours of training was provided for 97 family caregivers on Understanding the Aging Process, Caring for the Disoriented, Building Self-Esteem, Relieving Stress, Coping, and Nutrition and Diet.

GEORGIA Extension and the State Office on Aging are conducting training for managers and other meal-site managers. The 5-hour training includes menu modification and safe food handling practices. Seventy staff members have participated and other areas of the State will receive the training in the near future. A new 2-day training session will be offered in four regional sites and will focus on "Quantity Food Handling and Preparation." The "People Pet Connection" trains 4-H'ers to take pets to visit nursing home residents. The Georgia Veterinary Medical Association is one of the sponsors of this effort. Georgia pilot tested a "Senior Olympics" program in three rural counties and attracted 200 participants. "Senior Olympics" resources including organizing and operating procedures will be disseminated to Extension and Aging organizations by the Missouri Rural Aging Center and the Regional Rural Development Centers. Since 1981, over one-third of Georgia's counties have trained 2,500 caregivers. A new program based on previous experiences will train people on public assistance to become employed as companion program aides. Georgia Extension conducted 15 2-hour "Wills and Estate Planning" workshops for 684 older persons. Topics included: what is an estate, taxation, valuing an estate, duties of an executor/administrator, probate and options for managing assets when physically or mentally incapacitated. Seven 2-hour retirement planning workshops reached 298 mid-life participants with information on assessing one's current and anticipated after retirement financial status, savings and investments for retirement, and health and life insurance options.

In INDIANA, a "Youth Power for Community Growth Conference" was conducted by a leadership team of four adults and four youths who trained participants from 17 counties using the national prevention program "Dare to Be You." Since the conference community action programs such as recycling, opening a youth, center and conducting part clean-up projects have been conducted.

In IOWA, professionals, paraprofessionals, volunteers, and family members who interact with the elderly increased their understanding of legal, financial, emotional health, and leisure needs of elderly. Three hundred and ninety-two caregivers increased their awareness of aging issues through workshops. Five hundred activity directors in nursing homes statewide received a five series newsletter on art programming. Workshops and counseling sessions were conducted for 1,748 midlife individuals and families who implemented plans for legal and financial needs and changing lifestyles in the later years. Newsletters were received by almost 31,000 seniors. A 40-foot-long exhibit demonstrated housing designs, furnishings, and equipment that would contribute to independent living. This Farm Progress Show Exhibit was viewed by 75,000 people. A demonstration case management project for the frail

elderly has made 158 referrals. Three county Extension offices compiled resource lists of housing options and community services and made them available to many older people and their families. Two programs on providing a convenient, comfortable, and safe home for older adults reached 285 people.

A *KENTUCKY*-sponsored 4-day statewide conference was attended by 170 professionals and volunteer leaders. Aging related issues of the 1990's were identified through a State survey and a variety of educational programs and networking procedures to address priority issues were introduced. The conference was sponsored by Extension, the Kentucky Center on Rural Aging and the Sanders Brown Center on Aging. The Center on Rural Aging is providing mini-grants to encourage more creative county-level aging programs. A survey is being conducted to determine feasibility of establishing a Senior Citizen Volunteer Service Bank. Other Extension education programs were as follows: 3,600 persons attended learning sessions on "Coping with Caregiving; How to Manage Stress When Caring for Elderly Relatives;" 300 participants attended learning sessions on "Building Family Strengths: Grandparents;" 1,000 individuals attended learning sessions on "Living arrangements in Later Life;" 50 people participated in learning sessions on "Aging Parents: Helping When Health Fails;" 1,600 people participated in a program on "Health Quackery" presented at senior nutrition sites throughout Kentucky; also at nutrition sites, 275 individuals received educational sessions on "Medicare and Medicare Insurance Supplements;" in preparation for later life, 4,900 individuals attended learning sessions on "Midlife: Challenge and Opportunity." In Harlan and Pike counties, Extension is conducting an intergenerational pilot program that is funded by a private foundation. Retired teachers are teaching young people Appalachian heritage skills like story telling, folk dancing, and making dried apple dolls. Youth and seniors are working together on community beautification, and diet and fitness activities and future careers mentor programs.

In *MAINE*, the "Senior Companion Program" is conducted by Extension with an ACTION grant. Over 400 home-bound elderly receive a wide range of support services from the 80 subsidized Senior Companion Volunteers who are trained and supervised by the Extension Service and other agencies in three counties. Both the Senior Companions and the homebound frail elderly (each of whom receive in home services that could cost up to \$2,700 annually) benefit from this program. A National Council on Aging grant funds Senior Community Service Program in all 16 counties in Maine. This program employs 189 subsidized trainees who are 55 or older who receive on-the-job training while working for community agencies. The goal is for these subsidized trainees to acquire work place skills and to obtain unsubsidized employment. Thirty-three trainees progressed to this stage in the past year. Maine has developed a series of four videotapes with an accompanying viewer's guide designed to help grandparents explore their role in the family.

MISSOURI's "Center on Rural Elderly" with funding from a private foundation has been involved in the development and pilot testing of a "Senior Series" consisting of seven program guides and resources. The series focuses on creating community-based programs in which seniors have meaningful social and productive volunteer roles. The seven areas are "Caregiving," "Self-Care," "Nutrition," "Intergenerational," "Outreach," "Radio and Television Roles for Seniors," and "Senior Olympics." An extensive dissemination plan is being implemented in cooperation with the four Rural Development Centers. "Talent Ties" is being pilot-tested in several settings in the State such as rural areas and urban areas. In the program, seniors volunteer to share a hobby, craft, or skill with young people. A directory of the seniors and their skills is available and youth match their interests with the volunteer. A local coordinator obtains meeting rooms and provides support for the program.

In *NEVADA*, 200 older adults increased their ability to live independently in later years. They shared 100 ideas actually in use to make it easier and safer to live in one's own home despite temporary or permanent disabilities. One hundred and twenty older women participated in workshops on model programs to increase independence for rural elders and 42 newly widowed persons reported they were helped to deal with new responsibilities by a mail-out series "Newly Alone in Later Years." Two emerging issues which new programs will address are (1) late life planning (including living wills and addenda, funerals and alternative arrangements) and the importance of communicating these plans to family members and (2) recognition of the role of friends and neighbors as caregivers.

NEW JERSEY focused on providing caregiving programs to increase the knowledge and skills of those who provide care in homes or in institutional settings. The VIPP reached nine new volunteers who participated in the 20-hour training and who are now providing information to isolated caregivers. Nursing home staff members are the audience for newly developed publications on interacting with the frail

elderly. Extension conducted programs statewide on "Planning for Retirement" and reached 1,800 with many reporting increased knowledge and behavior changes. Some of the programs are presented at worksites.

In *NEW YORK*, "Senior Connections" is a Nassau County, New York, library-based information and referral service that links older people to needed resources. It is staffed by older volunteers who work with student interns from Adelphi University. Nassau County Extension staff provide research-based food and nutrition training programs for staff and volunteers. Nassau County Extension also publicizes the information and referral program and recruits older volunteers to run the program.

In *NORTH CAROLINA*, the 1990 Extension program involved 397 mid-life people in educational programs that increased their understanding of the aging process. The 1,862 Extension sessions on "Self-Care Practices" resulted in 308 older people making changes in their personal care. North Carolina Extension agents are active participants in "Aging Networks" in 37 counties. Educational programs on "Planning Ahead for Later Life" included living arrangements, health care, housing adaptations, and legal insurance and other financial decisions. The home economists reached over 5,000 and 126 Extension leaders reached almost 1,500 adults with this program. Two-hundred and ninety-eight volunteers have been trained and are helping caregivers as Volunteer Information Providers, Adult Sitters, and as Seniors' Health Insurance Information Program Volunteers (in cooperation with the North Carolina Department of Insurance). Support groups of family caregivers are being formed by Extension and other "Aging Network" staff. "Planning ahead for Elder Care" and "Training Family Caregivers" are in-depth programs with many educational components and packaged in different forms. These resources will contribute to the quality of caregiving in the home environment. Each of these programs is being supported by private sector funding.

In *NORTH DAKOTA*, 23 home economists and 29 volunteers received intensive VIPP training and have in return conducted sessions for over 1,700 caregivers over the past 2 years.

OHIO Extension State Office sponsored a satellite conference on "The Second Half of Life: A Look at Normal Aging." Normal physical, psychological and social changes that occur with aging, and the diversity of the population were addressed and discussion followed. Ohio had 21 confirmed downlink sites and there were 28 in other parts of the United States. VIPP has been conducted in 28 counties with 84 professionals and volunteers providing the training for 250 volunteers. New counties will enter the program in 1991. "Nutritional Needs of the Elderly" is an 8-week session on nutrition and weight management. Extension also responded to a request to organize and support a Widows Support Group in one county. The 30 Widows Support Group members have gained information on home security practices, investments, home repairs, etc., 40 Extension agents participated in a 3-day intensive workshop to gain research based information on the aging process and concerns of the elderly and their family members. "Senior Hotline" is a State newsletter written by Extension specialists and is available statewide.

In *SOUTH DAKOTA*, training was provided for paid workers and family members who are caregivers. A local caregiver support group which meets twice a month was formed in one community. A bimonthly "Caregiving" newsletter is available in 51 counties to paid and family caregivers. The South Dakota Office of Adult Services is providing \$1,600 to cover some of the postage for the newsletter. Educational programs for the elderly and their family members focused on adaptations in housing, making financial decisions such as long-term care insurance, nutrition, and health promotion.

TENNESSEE's initiative to "Strengthen Aging Families" consisted of conducting more than 5,000 programs throughout the State. Seminars and workshops were conducted for Senior Center, church, nursing home, Extension Homemaker and community groups. Home study courses and newsletters were other methods used to teach clientele financial planning for retirement, stress management, diet, health care, physical fitness, Social Security, and understanding the aging process.

In *TEXAS*, 70 OASIS (Older Adults Sharing Important Skills) volunteers have participated in the training and have provided 11,000 hours of service to nursing home residents to help them adjust to living in nursing homes. Caregivers Education Programs in 25 counties resulted in caregivers increasing, their caregiving and coping skills and knowledge of community resources. An Administration on Aging (AOA, HHS) funded "Minority Nutrition Peer Educator Pilot Project" resulted in 36 peer educators teaching nutrition and health promotion practices to 1,400 older minority senior nutrition site participants. Videotapes, consumer publications, and training manuals for this program were developed by Extension and the Texas De-

partment on Aging. Staff from each of the 28 Area Agencies on Aging and Extension staff in 54 counties have received training to conduct the Peer Educator Program. Videos and consumer resources are now available in Spanish as well as English. National dissemination efforts have provided the project information to 3,500 Aging and Extension Professionals. Youth Exchange with Seniors (Y.E.S.) is a pilot intergenerational program that is funded by a private foundation, 100 Extension agents, high school home economics teachers and senior citizens and 20 4-H and FHA members have received Y.E.S. training and are forming county Y.E.S. resource teams to coordinate county efforts which include youths providing services for seniors in their communities.

VIRGINIA continues to add new counties to VIPP implementation team. Four new counties were added this year and 45 volunteers became Volunteer Information Providers who are working with 164 caregivers. VIPP is operated in 26 counties by 295 VIPP volunteers who are working with 725 Caregivers. Extension has added new information and expanded segments of VIPP based on its experience with the program that began as national pilot effort 4 years ago. The State office prepares a bimonthly information column on "Aged Wisdom" for use by Extension Agents and Area Agencies on Aging throughout the State.

WEST VIRGINIA has received a grant from a private foundation to develop a model that can be replicated by Extension agents throughout the country. "Preventicare" is an educational health promotion program for older people. The 20-year-old Preventicare program has been run by a private foundation and has been available only in West Virginia. Through it participants have adopted life styles that promote their health and physical well-being and their quality of life by maintaining mobility, health, vitality and independence. The donor desires to institutionalize "Preventicare" and to make it available nationwide. This challenge has been accepted by West Virginia Extension.

FARMERS HOME ADMINISTRATION (FmHA)

Currently FmHA has two programs that directly affect older Americans:

- Federal Domestic Assistance (FDA) catalog number 10.415 Rural Rental Housing (RRH) Loans empowers the agency authorized under the Housing Act of 1949 as amended, Section 515 and 521, Public Law 89-117, 42 U.S.C. 1485, 1490a to make RRH loans. The objectives of this program are to provide and construct rental and cooperative housing and related facilities suited for dependent living for rural residents. Occupants must be low-to-moderate income families, senior citizens (62 years or older) or disabled.

Funds Allocated and Expended:

- During fiscal year 1989, \$554,900,000 was obligated to this program, and fiscal year 1990, \$571,903,835. There is an estimated \$487,815,000 allocated for fiscal year 1991 for the 515 program.

Program Accomplishments

- In fiscal year 1990, 268 senior citizens projects were funded totaling \$248,230,634.
- The second program, FDA 10.417 Very Low-Income Housing Repair Loans and Grants (Section 504 Rural Housing Loans and Grants) is also authorized under the Housing Act of 1949, its particular title is Title V, Section 504, as amended, Public Law 89-117, 89-754, and 92-310, 42 U.S.C. 1474. The objectives are to give very low-income rural homeowners an opportunity to make essential repairs to their homes to make them safe and to remove health hazards to the family or to the community. Applicants must own and occupy a home in a rural area and be without sufficient income to qualify for a section 502 loan under the FmHA regular housing program. To be a grant recipient, the applicant must be 62 years of age.

Fund Allocated and Expended:

- (Loans) fiscal year 1988—\$7,554,780; fiscal year 1989 \$11,330,000; (Grants) fiscal year 1988—\$12,500,090; and fiscal year 1989 \$12,000,000.

Program Accomplishments:

- In fiscal year 1988, 2,438 loans and 3,656 grants were made, and in fiscal year 1989, 3,633 loans and 3,656 grants were made.

FOOD AND NUTRITION SERVICE (FNS)

FOOD STAMP PROGRAM

Purpose.—To provide monthly benefits to help low-income families and individuals purchase a more nutritious diet.

Amount of Funds Allocated/Expended.—Elderly component for fiscal year 1989: \$818 million.

Accomplishments.—In fiscal year 1990, the Food Stamp Program provided \$14.1 billion in benefits to a monthly average of 19.9 million persons.

Households with elderly members accounted for approximately 19 percent of the total food stamp caseload in fiscal year 1988. However, since those households were smaller on average and had relatively higher net income, they received only 7 percent of all benefits issued.

The Food and Nutrition Service works closely with the Social Security Administration in order to meet the legislative objectives of joint application processing for Supplemental Security income households. In fiscal year 1989, the Agency renewed emphasis in this area in order to ensure that all eligible persons are informed about the Food Stamp Program.

The Food and Nutrition Service is also participating in the Supplemental Security Income Modernization Project. This project was initiated by the Commissioner of the Social Security Administration in order to review and study the Supplemental Security Income Program. As part of the process, hearings are being conducted in different parts of the country to obtain information about the program.

Research Project/Study.—Elderly Programs Study was completed in January 1990 by Mathematica Policy Research, Inc., at a cost of \$230,000. The Elderly Programs Study assessed the match between USDA programs and the needs of the low-income elderly. Major findings included:

- (1) USDA food programs appear to be well-targeted toward those elderly who most need food and nutrition assistance;
- (2) the measured impacts of USDA food assistance programs on nutrition outcomes of elderly participants are small but consistently positive;
- (3) while estimates of nonparticipation are imprecise, many presumably eligible low-income elderly do not participate in USDA programs;
- (4) collectively, the Nutrition Program for the Elderly, the Emergency Food Assistance Program and the Food Stamp Program appear to reach about half of the estimated eligible low-income elderly (reasons for nonparticipation are diverse; however, most State and local providers perceive that many unserved elderly eligibles may be very difficult to reach; and
- (5) a significant minority of low-income elderly participate in more than one USDA food assistance program. Providers in Detroit, Los Angeles, and New Orleans perceive local and Federal programs are complementing, rather than duplicating, each other.

Other Pertinent Information.—In fiscal year 1989, the Food and Nutrition Service worked closely with the American Association of Retired Persons in order to prepare three pilot sites located in Cleveland, OH, Memphis, TN, and Las Cruces, NM, to conduct outreach for food stamps. The Agency reviewed the Association's Food Stamp Training Manual for outreach volunteers, provided Agency materials and posters in both English and Spanish, provided speakers for the Kickoff Events, and reviewed the outreach questionnaire given to elderly applicants during the campaigns.

The Food and Nutrition Service plans to continue to provide technical assistance to the Association as they attempt a new venture entitled "Public Benefits Outreach Project." This project will consist of 10 sites that will focus outreach on Food Stamps, Supplemental Security Income, and Medicaid simultaneously.

On November 28, 1990, the President signed the Mickey Leland Memorial Domestic Hunger Relief Act. It contained several provisions designed to help the elderly, such as:

- (1) excess medical expense deduction;
- (2) simplification of resource and eligibility determinations; and
- (3) less restrictive eligibility rules for students between the ages of 50 and 60.

CHILD AND ADULT CARE FOOD PROGRAM

Purpose.—To provide Federal funds to initiate, maintain, and expand nonprofit food service for children and elderly or impaired adults in nonresidential institutions which provide child or adult care. The program enables child and adult care institutions to integrate a nutrition food service with organized care services.

The adult day care component permits adult day care centers to receive reimbursement for meals and supplements served to persons 60 years or older and to chronically impaired adults. An adult day care center is any public or private non-profit organization or any proprietary Title XIX or Title XX center licensed or approved by Federal, State, or local authorities to provide adult day care service to eligible adults.

Amounts of Funds Allocated/Expended.—Adult day care component for fiscal year 1990: \$7.9 million expended.

Accomplishments.—The adult day care component of the Child and Adult Care Food Program served approximately 8 million meals and supplements to about 17,000 participants a day.

Research Project/Study.—Adult Day Care Study was conducted by the Office of Analyses and Evaluation (Food and Nutrition Service) at a cost of \$900,000. The objectives of this study are to:

- (1) describe the characteristics of the adults and the adult day care centers participating in the adult day care component of the Program;
- (2) compare participating centers and adults to centers and adults not participating in the Program;
- (3) determine participants' dietary intakes; and
- (4) project potential future Program growth.

COMMODITY SUPPLEMENTAL FOOD PROGRAM

Purpose.—To provide supplemental foods, in the form of commodities, nutrition education, and social service referrals to infants and children up to age 6; pregnant, postpartum, or breastfeeding women; and elderly who have low incomes and reside in approved project areas.

Service to the elderly began in 1982 with pilot projects. In 1985, legislation allowed the participation of older Americans outside the pilot sites if available resources exceed those needed to serve women, infants and children. Many operations provide delivery to home-based elderly. Additionally, the recently enacted Farm Bill authorizes elderly-only Commodity Supplemental Food Program sites.

Amount of Funds Allocated/Expended.—Elderly component for fiscal year 1990: \$18 million expended.

Accomplishments.—About 26 percent of total Program spending provides meals to approximately 107,000 participants a month.

Research Project/Study.—The Elderly Research Study described under the Food Stamp Program addressed this Program as well.

FOOD DISTRIBUTION PROGRAM ON INDIAN RESERVATIONS

Purpose.—To provide commodity packages to eligible households, including households with elderly persons, living on or near Indian reservations. Under this Program commodity assistance is provided in-lieu of food stamps.

Amount of Funds Allocated/Expended.—Approximately \$23 million in commodities were distributed to households with at least one elderly person. This figure was estimated using a 1990 study that found about 39 percent of Program participants' households had at least one elderly person.

Accomplishments.—This Program serves approximately 17,500 households with elderly participants each month.

Research Project/Study.—Evaluation of the Food Distribution Program on Indian Reservations was conducted by the Office of Analysis and Evaluation at a cost of \$740,000. The objective of this study was to describe program operations and participant characteristics. The characteristics of older American participants were described as well as the characteristics of other participants.

NUTRITION PROGRAM FOR THE ELDERLY

Purpose.—To provide commodities and cash reimbursement for meals served under the Older Americans Act programs. The Nutrition Program for the Elderly provides food assistance through both home delivered meals and in congregate meal settings.

Amount of Funds Allocated/Expended.—Fiscal year 1990: \$139 million expended.

Accomplishments.—Approximately 245 million partially subsidized meals are served to about 930,000 participants a day.

Research Project/Study.—The Elderly Research Study described under the Food Stamp Program addressed this Program as well.

THE EMERGENCY FOOD ASSISTANCE PROGRAM

Purpose.—To provide nutritional assistance in the form of commodities to emergency feeding organizations for distribution to low-income households for household consumption or for use in food kitchens.

Amount of Funds Allocated/Expended.—Approximately \$101 million in commodities were distributed to households headed by the elderly. This figure is estimated using a 1986 survey indicating that about 38 percent EFAP households have members 60 years of age or older.

Accomplishments.—About 38 percent of the program participant households receiving commodities under this program had at least one elderly person.

Research Project/Study.—The Elderly Research Study described under the Food Stamp Program addressed this Program as well.

FOOD DISTRIBUTION PROGRAM FOR CHARITABLE INSTITUTIONS AND SUMMER CAMPS

Purpose.—To provide commodities to nonprofit charitable institutions serving the needy. Eligible charitable institutions include nonpenal, noneducational, nonprofit organizations such as homes for the elderly, congregate meals programs, hospitals, and soup kitchens.

Amount of Funds Allocated/Expended.—Elderly component for fiscal year 1990: \$18 million expended.

FOOD SAFETY AND INSPECTION SERVICE (FSIS)

A new consumer education campaign was developed by FSIS and targets older Americans, one of several groups of people who face special risks from foodborne illness. The campaign was announced during National Consumers Week (April 22–28, 1990). The goal is to reduce the incidence of foodborne illness due to consumer mishandling of food. Foodborne illness can lead to serious health problems and even death for a person who is chronically ill or has a weakened immune system. The elderly, with more than 35 million people in their ranks, are the largest group at risk and are increasing in number.

FSIS devoted the Spring issue of its *Food News for Consumers* magazine to detailing how foodborne illness affects those at-risk and how to prevent it. Reprints of the articles were made available to more than 30 organizations representing or providing services to the elderly and 600 Area Offices on Aging (see enclosures).

Additional materials were distributed at conventions such as the annual meeting of the American Association of Retired Persons and the National Association of Area Agencies on Aging. FSIS also produced a video news release on food safety for those at-risk which are aired on several cable stations with programing specifically targeted to the elderly.

A press kit was distributed to 600 media outlets on a mailing list providing by the National Institute on Aging. Since all the materials included information about the FSIS toll-free Meat and Poultry Hotline, many elderly people have called with food safety questions. FSIS will continue work on this project throughout 1991.

FOREST SERVICE

PROGRAMS AFFECTING THE ELDERLY

1. Title and purpose statement of each program or activity which affects older Americans.

SENIOR COMMUNITY SERVICE EMPLOYMENT PROGRAM

The U.S. Department of Agriculture, Forest Service, in cooperation with the U.S. Department of Labor, sponsors the Senior Community Service Employment Program (SCSEP), which is authorized by Title V of the Older Americans Act, as amended. The SCSEP has three fundamental purposes: (1) part-time income for disadvantaged persons aged 55 and over; (2) training and transition of participants to the private/public sector labor markets; and (3) community services to the general public. This program employs economically disadvantaged persons aged 55 and older in 38 States, the District of Columbia, and Puerto Rico. The SCSEP seeks to improve the welfare of underprivileged, low-income elderly, and to foster a renewed sense of self-worth and community involvement among the rural elderly.

2. The Amount of Funds Allocated or Expended.

The Service's Interagency Agreement for July 1, 1989, to June 30, 1990, provided \$22.9 million which employed an estimated 5,842 seniors of which 21 percent were minorities, and 37 percent were women.

3. Brief Description of Accomplishments:

a. Special emphasis was placed on the area of training among the Forest Service participants; Some enrollees have taken advantage of the localized training; and others have passed the high school equivalency test.

b. Sixteen percent of the participants were placed in unsubsidized jobs; and over 150 were employed by the Forest Service in part-time or full-time positions.

c. The Government reaped a return of \$1.60 for each dollar invested in this program.

4. Name of research project/study and unit, project description, and funding level of any research project applicable to problems of older Americans.

None this program year.

5. Any other pertinent information which reflects your agency's involvement in programs or activities affecting older Americans.

None.

VOLUNTEERS IN THE NATIONAL FORESTS

1. Title and purpose statement of each program or activity which effects older Americans.

The Volunteer Program offers individuals from all walks of life the opportunity to donate their services to help manage the Nation's natural resources. This program continues to grow in popularity as people realize how they can personally help carry out natural resource programs. Volunteers assist in almost all Forest Service programs or activity except law enforcement. They may choose to work in an office at a reception desk, operate a computer terminal, or conduct natural history walks and auto tours. Volunteers may also be involved in outdoor work such as building trails, maintaining campgrounds, and improving wildlife habitat.

2. The amount of funds allocated or expended.

This program is not funded with specific appropriations. General Administration dollars are used to pay incidental expenses.

3. Brief description of accomplishments.

During fiscal year 1990, 11,526, persons aged 55 and above volunteered their services in the National Forests.

4. Name of research project/study and unit, project description, and funding level of any research project applicable to problems of older Americans.

None this fiscal year.

5. Any other pertinent information which reflects your agency's involvement in programs or activities affecting older Americans.

None.

NATIONAL AGRICULTURAL LIBRARY (NAL)

INFORMATION CENTERS

a. *Rural Information Center.*—The Rural Information Center Health Service (RICHS) component of NAL's Rural Information Center provides information on rural health care to any person seeking such information. Older rural Americans represent a significant potential user group for this new (October 1990) NAL service.

b. *Food and Nutrition Information Center.*—NAL's Food and Nutrition Information Center (FNIC) serves any person seeking information or educational materials in the area of food and human nutrition. While statistics on the age of users of this service are not kept, it is assumed, by virtue of the increased public awareness on elderly care and wellness, that elderly Americans represent a large percentage of users.

c. *Family Information Center.*—NAL's Family Information Center (FIC) serves as a focal point for those interested in strengthening the family and assists them in obtaining current literature regarding the family unit and its individual members, including the elderly.

The Amount of Funds Allocated or Expanded

a. RICHS is funded by the U.S. Department of Health and Human Services which has agreed to transfer \$900,000 to NAL over the 3 years beginning 1989. The per-

centage of those funds which go to aid older Americans cannot be determined because of statistics on the ages of people seeking rural health information from RICHs are not kept.

b. FNIC's annual budget is \$230,000. Like the situation with RICHs above, the percentage of those funds which go to aid older Americans cannot be determined because statistics on the ages of callers seeking food and nutrition information are not kept.

c. FIC's annual budget is \$29,000. In April 1990, approximately \$1,000 was spent to publish and make available to the public 12 bibliographies on aging produced by the National Agricultural Library. The person who developed the bibliographies was a college professor on 6-month sabbatical. Although not paid for this project, it is estimated that the professor's time in producing the series was worth about \$30,000.

Brief Description of Accomplishments

a. Throughout the year, 5 days a week from 8 a.m. to 4:30 p.m., information specialists from RICHs and FNIC are available to answer questions and direct callers to information. The centers also handle written requests.

b. In April 1990, a University of Maryland professor working on a 6-month sabbatical at NAL completed a series of 12 bibliographies on aging. The bibliographies offer suggested readings to researchers, educators, and consumers. These were printed and made available, free of charge, to the public by NAL. Subjects covered in the bibliographies include: adult children, aging parents, dementia, and Alzheimer's disease in the elderly (two versions), family caregiving, family support networks, grandparenting, humor in later life, intergenerational relationships, living arrangements in later life, pets and the elderly, sibling relationships in adulthood.

OFFICE OF CONSUMER ADVISOR (OCA)

OCA's activities which affect older Americans include:

Advising senior USDA officials about issues of concern to consumers. Many, including food safety, and nutrition, and food labeling are of particular concern to older Americans.

Outreach, including speeches, meetings, and correspondence, provides information about USDA programs, and activities including those which interest older Americans.

The 1990 USDA/FDA Journalists' Conference organized by OCA, attracted 300 journalists and other information multipliers from across the country. The Conference provides journalists information and key contact people to enable accurate reporting.

Participation in the White House Consumer Affairs Council ensures all consumers are considered in Department, and U.S. Government.

SOIL CONSERVATION SERVICE (SCS)

The Soil Conservation Service (SCS) has no programs aimed specifically for the aged. However, the agency's principal program of providing technical assistance to farmers, ranchers, and others on soil and water conservation issues is delivered without regards to any form of discrimination, including age. The agency staff annually provides technical assistance to slightly more than 1 million eligible program beneficiaries. Statistics indicate that 45.3 percent of agency program clientele that's involved in farming and other occupations are age 55 and above.

The Earth Team, the volunteer arm, of SCS, includes participants from all age levels. A large percentage of SCS volunteers are age 55 and older. They assist with program efforts in 51 percent of SCS offices nationwide. From October 1, 1989-September 30, 1990, a total of 9,705 volunteers donated 307,598 hours of their time to the cause of soil and water conservation.

Here at the National headquarters, there are currently 69 volunteers having donated 8,852 hours. Ten of the 69 are over 55-years-old and retired.

ITEM 2. DEPARTMENT OF COMMERCE

DECEMBER 14, 1990.

DEAR MR. CHAIRMAN: Thank you for your letter regarding the Department of Commerce programs pertaining to older Americans.

We are enclosing our report for 1990 for inclusion in the Developments in Aging, Volume II. The report identifies relevant programs that are of benefit to the older population.

If you need further information, please have a member of your staff call Ms. Cynthia Taeuber, Bureau of the Census, Population Division, at (301) 763-7883.
Sincerely,

ROBERT A. MOSBACHER.

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OTHER REPORTS, PAPERS, DATA BASES, AND CONTINUING WORK

I. The Federal Interagency Forum on Aging-Related Statistics

The Census Bureau is one of the lead agencies in The Federal Interagency Forum on Aging-Related Statistics (The Form), a first-of-its kind effort. The Form encourages cooperation among Federal agencies in the development, collection, analysis, and dissemination of data pertaining to the older population. Through cooperation and coordinated approaches, The Form extends the use of limited resources among agencies through joint problem solving, identification of data gaps, and improvement of the statistical information bases on the older population that are used to set the priorities of the work of individual agencies. The participants are appointed by the directors of the agencies and have broad policymaking authority within the agency. Senior subject-matter specialists from the agencies are also involved in the activities of The Forum. The Forum was cochaired in 1990 by Barbara Everitt Bryant, Director, Bureau of the Census; Manning Feinleib, Director, National Center for Health Statistics; and T. Franklin Williams, Director, National Institute of Aging.

At the initial meeting of the Forum, held October 24, 1986, it was agreed that The Form would work on the following activities: (1) identify data gaps, potential research topics, and inconsistencies among agencies in the collection and presentation of data related to the older population; (2) create opportunities for joint research and publications among agencies; (3) improve access to data on the older population; (4) identify statistical and methodological problems in the collection of data on the older population and investigate questions of data quality; and (5) work with other countries to promote consistency in definitions and presentation of data on the older population.

Three standing committees were established to carry out specific activities: (1) Data Needs and Analytic Issues, chaired by Joan Van Nostrand (National Center for Health Statistics); (2) Methodological Issues, chaired by Richard Suzman (National Institute on Aging); and (3) Data Presentation and Dissemination, chaired by Cynthia Taeuber (Bureau of the Census).

The work of The Forum facilitates the exchange of information about needs at the time new data are being developed or changes are being made in existing data systems. It also works to promote communication between data producers and policy-makers.

As part of The Form's work to improve access to data on the older population, the Census Bureau has published an information bulletin titled *Data Base News in Aging*, which brings news of recent developments in data bases of interest to researchers and others in the field of aging. All Federal agencies are invited to contribute to the bulletin, which is issued periodically.

The Census Bureau has also published a report of the Income Working Group of the Federal Interagency Forum on Aging-Related Statistics titled *Income Data for the Elderly: Guidelines*, which recommends ways in which data-collecting agencies can improve the comparability, quality, and usefulness of the income data collected across surveys, a *Form Telephone Contact List* of major agencies and staff who work

on specific aspects of aging-related statistics, the *Inventory of Data on the Oldest Old*, which is a reference document of Federal data bases on the oldest old population, and the *1988 Annual Report of the Forum*, which reviews the activities of The Forum and its member agencies during 1987 and 1988. Various sections of the annual report summarize Form work and accomplishments, cooperate efforts of members, publications by member agencies, and activities planned for 1989.

The National Center for Health Statistics, a participating Federal agency of the Forum on Aging-Related Statistics, has published a report from the Committee on Estimates of Activities of Daily Living in National Surveys titled *Measuring the Activities of Daily Living Among the Elderly: A Guide to National Surveys*. This report focuses on the activities of daily living and provides a guide to policymakers and researchers on the national surveys that measure activities of daily living and on the issues that must be addressed in using data from these surveys.

II. Projects Between the Census Bureau and the Administration on Aging

A report titled "Guide to 1980 Census Data on Elderly" was published in 1986. This guide explains how to locate census data on the older population. The report reviews census products, services, and explains how to obtain them. The report has table outlines from the census publications and summary tape files to show the specific form of data available about the older population.

III. Projects Between the Census Bureau and the National Institute on Aging

A. The Census Bureau prepared special tabulations from the 1980 census for the National Institute on Aging. These tabulations include selected tables from Summary Tape File 5 retabulated with 5-year age groups from 60 years to 85 years and over. These tabulations also include other selected tabulations from the 1980 census. The University of Michigan archives these tabulations (Barbara Zimmerman, 313-763-5010).

B. Developed an international data base on the older population. The University of Michigan archives this data base (Barbara Zimmerman, 303-763-5010).

C. Established a joint Visiting Scholar Program to allow scholars to do research in residence at the Census Bureau.

D. Study of the quality of census data on the elderly includes an evaluation of coverage, age misreporting, estimates, and projections of centenarians, and so forth.

E. Preparation of a file from the Survey of Income and Program Participation (SIPP) on the health, wealth, and economic status of the older population. The SIPP file is completed and is archived at the University of Michigan (Barbara Zimmerman, 313-763-5010).

F. Programming is near completion for the annual report on the older population, *Aging America*, using Current Population Survey data. Data will be provided for persons aged 65-74, 75-84, and 85 and over. Most data will be cross-tabulated by sex, race, and Hispanic origin. Some data will be produced in confidence intervals because of small sample sizes for the aged.

G. Provided The National Institute on Aging with special tabulations on poverty of rural elderly (from 1980 census).

H. A paper titled "Minority Elderly: An Overview of Demographic Characteristics" was prepared by Cynthia M. Taeuber and Denise I. Smith of the Census Bureau. The paper focuses on increases in the minority elderly population, those 65 years and over, and the differences among age, race, and ethnic groups within the older population. Some of the characteristics of the minority elderly population discussed are marital status, living arrangements, median income, and poverty status. The paper also presents an overview of the planned 1990 census questions on race and ethnicity.

I. "A Demographic Portrait of America's Oldest Old" was prepared by Cynthia M. Taeuber, Bureau of the Census, and Ira Rosenwaike, Graduate School of Social Work, University of Pennsylvania, for a chapter in a book. This chapter looks at the rapid growth of the oldest old population, those 85 years and over and the reasons for that growth. This chapter also: (1) compares the oldest old's demographic, social, and economic characteristics with those of the younger old; (2) describes the characteristics of the centenarian population; (3) examines the quality of census data on the oldest old; and (4) discusses the implications of the growth and characteristics of this unique and important group.

J. Reprogrammed the regularly published tabulations of the Current Population Survey to include data for the population "65 to 74 years" and "75 years and over" in annual reports (see especially P-20, Nos. 431, 433, 437, P-60, No. 166, the forth-

coming report on educational attainment, and the forthcoming reports on money income and poverty).

IV. International Research on Aging

A. Studies from the International Data Base on Aging:

1. "Demography of Older Populations in Developed Countries," submitted as a chapter for the forthcoming Oxford Textbook of Geriatric Medicine. Richard Suzman of the National Institute on Aging, Kevin Kinsella of the Census Bureau, and George Myers of Duke University are the authors of this chapter. The chapter reviews past and projected trajectories of growth of older populations, socioeconomic characteristics, and current and expected health status.

2. A paper titled "Population Dynamics of the United States and the Union of Soviet Socialist Republics" was prepared by Barbara Boyle Torrey and Ward Kingkade of the Census Bureau of the United Nations Seminar on Demographic and Economic Consequences and Implications of Changing Population Age Structure in Ottawa, September 1990.

3. A paper titled "Change in Life Expectancy—1900 to 1990" was prepared by Kevin Kinsella of the Census Bureau for presentation at an International Conference on Aging: Nutrition and the Quality of Life in Marbella, Spain. The paper summarizes levels of and changes in life expectancy at birth and at older ages in industrialized countries during the 20th century. Trends in mortality and morbidity are summarized in the context of the historic epidemiological transition in the nature of disease from infectious to chronic. Cause-specific and active/inactive decompositions of life expectancy are examined, as are initial attempts to correlate life expectancy and physical attributes that may reflect differential nutritional status.

4. Published the first five of a series of 20 statistical briefs: "Aging Trends—Barbados," "Aging Trends—Kenya," "Aging Trends—Thailand," "Aging Trends—Guatemala," and "Aging Trends—Zimbabwe." All were prepared by The Center for International Research of the Census Bureau. These profiles include a contrast of current and future numbers and proportion of older populations and comparative data for other nations in the immediate geographical region.

5. A paper titled "Living Arrangements of the Elderly and Social Policy: A Cross-National Perspective" was prepared by Kevin Kinsella of the Census Bureau. The paper examines family and household structure, changes over time, and potential implications for social support and expenditures.

6. "A Comparative Study of the Economics of the Aged," presented at the Conference on Aged Populations and the Gray Revolution in Louvain, Belgium. Barbara Boyle Torrey and Kevin Kinsella of the Bureau of the Census and Timothy Smeeding of Vanderbilt University are the authors of this paper. The paper presents estimates of how social insurance programs for the aged have grown as a percentage of gross domestic product in several countries partly as a result of lowering retirement age and an increase in real benefits. It then discusses how the labor force participation of the aged in these countries has uniformly declined. Finally, it examines what contribution the Social Security benefit makes to the total income of the aged at present and how the average income of the aged compares to the average national income in each country.

7. "The Oldest Old—International Perspectives," submitted as a chapter in a future Oxford University Press publication. Barbara Boyle Torrey and Kevin Kinsella of the Bureau of the Census and George Myers of Duke University are the authors of this paper. The paper focus on three topics related to the oldest old (80+) in eight countries. The topics discussed are demographic trends, marital status and living arrangements, and income. The paper shows cross-country comparisons and trend data on the above topics for the period 1985 to 2025.

8. *Aging in the Third World* has been published in International Population Reports, Series P-95, No. 79.

9. *An Aging World* has been published in International Population Reports, Series P-95, No. 78.

B. Completed a contract with Meyer Zitter, a consultant in demographics, to work with other industrialized countries to produce internationally-comparable data on the older population from the 1990 round of censuses. A report titled "Comparative International Statistics available on the Older Population" was prepared by Meyer Zitter and is available. The report focuses on data available from the 1980 round of censuses and what subjects will be available from the 1990 round of censuses. The countries also sent 1980 census tabulations that are somewhat comparable. This

report will make it possible to recommend tabulations for 1990 that countries may wish to produce to allow international comparability.

V. Other

A. Prepared text on the older population for inclusion in the Census Bureau's publication, *Population Profile of the United States: 1989*, Series P-23, No. 159.

B. Prepared paper on "Emerging Data Needs for the Elderly Population in the 21st Century" for public discussion of the census of 2000.

C. Prepared a chapter on demographic trends for older population titled "Diversity: The Dramatic Reality" for inclusion in the book *Diversity in Aging: The Issues Facing the White House Conference in Aging and Beyond*, published by Scott-Foresman in 1989 (Cynthia M. Taeuber, Population Division).

D. Worked with the Department of Housing and Urban Development to produce tabulations from the Survey of Income and Program Participation for use in designing reverse annuity mortgage programs for low-income elderly homeowners.

E. A paper titled "How Are The Elderly Housed? New Data From the 1984 Survey of Income and Program Participation" was presented at the April 23, 1988 Annual Meeting of the Population Association of America in New Orleans, LA. The author of this paper is Arnold A. Goldstein, Population Division, Bureau of the Census. This paper serves the dual purpose of reporting on the housing characteristics of elderly households of various age groups, and of introducing the Health-Wealth file from the 1984 Survey of Income and Program Participation (SIPP). The paper describes the prevalence of various housing types, household size, length of residence in the present housing unit, and the age of the structure itself. Level of comfort is measured in terms of extent of crowding, number of floors, type of heating fuel and presence of air conditioning, and availability of various appliances. Affordability, an important public policy consideration, is addressed separately for owners and renters. The paper also considers the extent to which low-income older households benefit from rent and mortgage interest subsidies, and whether many of these households are on a waiting list to gain access to public housing.

ITEM 3. DEPARTMENT OF DEFENSE

DECEMBER 14, 1990.

DEAR CHAIRMAN PRYOR: In response to your letter of September 24, requesting input for the annual Developments in Aging report, I am hereby submitting a summary of recent activities undertaken by the Department of Defense on behalf of aging Americans.

In gathering this information, I requested that the Military Services personnel departments, the Civilian Personnel Policy office and the Military Manpower and Personnel Policy office gather pertinent information that might be included in the report. The Services queried their installations to determine the scope of the activities being undertaken on behalf of the elderly. In doing so, I have gathered the attached information. I hope it will be of value to you.

Should you need further information, please feel free to contact Michelle McIntyre in the Office of Family Support and Services at 703-697-7191.

Sincerely,

MILLICENT W. WOODS,
Deputy Assistant Secretary of Defense
(Personnel Support, Families, Education and Safety)

Enclosures as stated.

DEPARTMENT OF DEFENSE—1991 SENATE DEVELOPMENTS IN AGING REPORT

The Department of Defense continues to look to the future to ensure that our Service members, civilian personnel and their families are provided strong support for all of their family care needs. This support includes offering services to our aging population and its families in the form of retirement programs and various elder care activities through mechanisms such as Family Service Centers and various other family support programs.

Additionally, the Department of Defense is currently undergoing a review of the needs which exist with regard to the care of elder family members of service members and civilian DoD employees. DoD realizes that more attention must be focused on future programs to meet these needs.

Exploring elder care needs verifies the high priority the Secretary of Defense places on ensuring a high quality of life for civilian employees, service members, and their families.

Following are reports from the Departments of the Army, Navy, and Air Force respectively on what current initiatives are underway to assist families in coping with issues resulting from aging.

DEPARTMENT OF THE ARMY

Although the Department of the Army does not have an established program of support groups for elder dependents of active duty members and elder retirees and their family members, the Army does seek to help in several ways. To the maximum extent possible, installation Army Community Services maintain a listing of elder and other support groups available in the local civilian community. Military individuals who seek these support groups are then appropriately referred.

The Department of the Army has a viable Retirement Service Program. This program is administered by installation Retirement Services Officers (RSO) who are either Federal civil service employees or active duty personnel. Installations also have Installation Retiree Councils which assist the RSO and the Commander in providing information and support to Army retirees. Installations publish retiree newsletters and conduct annual Retiree Appreciation Days which are designed to provide information updates, cursory medical checks, and an opportunity for continual bonding of the retired community with the active duty community.

The U.S. Soldiers' and Airmen's Home provides a place of residence for disabled and aged retirees. The USSAH provides a full range of support for retirees who reside at the Home.

Department of the Army Widowed Support Groups are operated for the mutual support of all those widowed by either an active duty or a retiree death. It is open to all regardless of age.

The Department also has an installation volunteer Family Support Group Program. This program does not target the elderly, but they are welcomed into the program, either as family members or as volunteers to help operate the program. Installation Family Support Groups during unit deployments for Operation Desert Shield have demonstrated their value, for they have truly functioned in an outstanding manner.

DEPARTMENT OF THE NAVY

The Navy initiatives to provide support to retirees and elderly dependents range from information and referral to counseling. Programs that are widely used by elderly dependents are information and referral to community services for the elderly, medical assistance, legal assistance, volunteer/food locker program.

Programs widely used by retirees are casualty assistance, stress counseling, letter writing assistance, retiree conference, retirement seminars, and employment assistance.

Retirement programs are offered through the base Retired Affairs Offices (RAOs). RAOs provide services such as the notification of the next of kin in the case of death, stress counseling, and assistance with selection of insurance policies. The RAOs will also, under certain circumstances, write letters for retired personnel. Seminars on pre- and post-retirement, burial benefits and CHAMPUS are given, and walk-in assistance is available as well. Retiree conferences are held at base sites either semi-annually or annually and generally draw a large number of participants.

"Taking care of our own" is personified in the U.S. Naval retirement home established in 1832 in Gulfport, MI. At the Naval Home, retired Navy and Marine Corps officers, enlistees, and wartime veterans with campaign medals, are provided a permanent, home-like environment.

Shift Colors, a Navy publication for retirees, is published quarterly and is sent to all Navy retirees. This publication has a wealth of information on benefits, eligibility, and community services available to retirees.

At the 1988 Department of Navy Family Support Conference, a major presentation was conducted on the "Aging of America: Options and Implications." This session focused on specific concerns that should be considered by military personnel as well as recommendations for the care of elderly parents when geographically separated. The net effect of the presentation was a heightened awareness in the Navy and Marine Corps of the challenges associated with and the community services available for the care of the elderly.

Program managers continually disseminate information on retirees and the elderly through the FSCs and the Retired Affairs Offices. For example, a valuable publication, *How to Care for Your Parents: An Adult Handbook* was distributed to all Navy Family Service Centers. This publication has proven extremely valuable for

military members in caring for elderly parents with numerous military members obtaining copies for their own personal use.

Navy Family Service Centers are responding to the needs of the elderly as they arise and according to resources available. There are, however, few requests to provide programs specifically for the elderly. Some Family Service Center services used by the elderly include counseling, information, and referral to agencies for services such as respite care, medical and legal assistance, and in-home (e.g., meals on wheels, and on base food drives). Similar types of information and referral services are available through civilian personnel employee assistance programs.

DEPARTMENT OF THE AIR FORCE

The Air Force field query revealed a variety of Air Force programs for military and civilian retirees and elderly persons. Medical programs center around promoting healthy lifestyles and providing medical, dental, and pharmaceutical service on a space available basis. Air Force Personnel programs include: (1) the Retiree Activities Program, which provides services to aging service members and their dependents at 127 Retiree Activities Offices, (2) an initiative by Civilian Personnel to assess the need for elder care and to develop a long-term strategy for responding to these needs by late 1990, (3) a social activities group at Ramstein Family Support Center, Ramstein AB, Germany, and (4) information programs for those who are caring for aging parents at Hanscom AFB, MA, and Peterson, AFB, CO.

At many Air Force bases, a representative from the Retiree Affairs Office is a member of the Health Promotion Committee. This person provides input to the committee on types of activities that could be held to benefit retired members and their dependents. Additionally, the Air Force has established civilian Retirement Councils as part of a joint effort between the Air Force and the National Association of Retired Federal Employees. The Retirement Council Program objectives are to welcome Air Force retirees back into the extended Air Force family through their association with and assistance from the base, to provide a forum that serves as a focal point through which retirees gain knowledge of legislative and other matters which affect them, and to offer a broader foundation for leisure and volunteer/employment activities through association with other members of the retired community and the base.

A majority of the Air Force medical treatment facilities host annual or semiannual health fairs geared toward the health screening of retirees and their dependents. Most facilities offer vision, hypertension, diabetes, hypercholesterolemia, and cancer screenings. At many of these medical treatment facilities, the Health Promotion Coordinator works in conjunction with the Family Medicine Clinic in putting the health fairs together and advertising them. The Health Promotion Coordinators often use the health fairs as opportunities to market ongoing health promotion initiatives available to the older population and improve awareness of lifestyle behaviors known to be linked to chronic disease.

Many Air Force bases routinely offer programs run by the Health Promotion Clinics to target older beneficiaries such as fun walks or volksmarches, commissary shopping tours designed to teach how to shop healthfully and read nutrition labels on food packaging, and behavior modification classes for smoking cessation, stress management, weight control, back injury prevention, and cholesterol reduction.

At base-sponsored annual Retiree Appreciation Days, Health Promotion Coordinators set up Health Promotion information and screening booths.

Many Health Promotion Coordinators regularly participate in quarterly medical treatment facilities Health Consumer Advisory Council meetings to brief all beneficiary groups about ongoing and future health promotion initiatives. Since this council has a large representation of retirees, this is an excellent forum for advertising the components of the Health Promotion program most applicable to older beneficiaries.

An additional benefit available to retirees and their dependents is space available dental care. This treatment of retirees and their dependents has represented over 13 percent of the total Air Force dental workload.

Also, in 1988 the Air Force Directorate of Civilian Personnel developed the PALACE Agenda, the Air Force's strategic plan for civilian personnel management. Part of this strategy was the decision to pursue a number of quality-of-life initiatives that would contribute to the sustainment of the Air Force's civilian workforce. One of these initiatives is elder care. It is the Air Force's intention to assess the need for elder care, and develop a long-term strategy, in late 1990. It is the Air Force objective to initiate two tests of different elder care initiatives by the end of 1991.

Another Air Force program benefiting aging service members and their dependents is the Retiree Activities Program (RAP). RAP is the formal interface between retirees and active duty members. It is a retiree volunteer service supported by the active duty community. The program's focal point is the base level Retiree Activities Office (RAO) manned by retiree volunteers. While the RAP was not designed expressly for the aging population, older retirees and dependents, particularly surviving spouses, are assisted by RAOs in such matters as preparing income tax returns, estate planning, and benefits counseling. RAOs also publish local newsletters that contain updates on benefits, privileges, and entitlements. As previously mentioned, the Air Force has 127 RAOs located throughout the United States and overseas.

The Air Force also provides aging information seminars to provide assistance which can help employees understand the options available to balance work and caregiving responsibilities. The seminars cover a wide range of relevant issues for working caregivers and pre-retirees.

Seminars are presented by specialists who are experienced, knowledgeable, and skilled in the aging field. They include social workers, nurses, attorneys, and financial planners. Information packets are presented to each participant and include information on such issues as "Community Resources for Elders and Their Families"; "Caring for an Elderly Relative"; and "Legal Issues: Planning for Your Future".

There have also been occasions where base Family Support Centers have brought together community experts to address various aging issues. The issues discussed have been broad, to include sessions on the caregiving role, daycare facilities, home care, health care costs, recreation for the elderly, and living wills.

ITEM 4. DEPARTMENT OF EDUCATION

DECEMBER 14, 1990.

DEAR MR. CHAIRMAN: This is in reference to your letter of September 24 requesting the Department of Education's fiscal year report chronicling activities on behalf of older Americans.

I am pleased to transmit this summary to you for inclusion in the Committee's annual report entitled, *Development in Aging*.

If the Office of Legislation and Congressional Affairs can be of further assistance, please let me know.

Sincerely,

NANCY MOHR KENNEDY.

Enclosures.

OFFICE OF SPECIAL EDUCATION AND REHABILITATIVE SERVICES—REHABILITATION SERVICES ADMINISTRATION (RSA)

BASIC VOCATIONAL REHABILITATION PROGRAM

The State-Federal program of vocational rehabilitation is designed to provide a wide variety of services to adults with disabilities for the purpose of placing them into gainful employment. There are no upper age limits for clients of State rehabilitation agencies. Although the mean age at the time of referral of individuals who were vocationally rehabilitated in fiscal year 1988 (the latest year for which such data are available) was 33.3 years, 10.7 percent of these persons were 45 to 54 years old; 6 percent were 55 to 64 years old; and 3 percent were 65 years old or older. Nearly one rehabilitated person in five was 45 years of age or older when referred for vocational rehabilitation services. The total number of individuals of all ages rehabilitated in fiscal year 1988 was 218,241.

Age is not a barrier to eligibility for vocational rehabilitation services for older persons with disabilities who wish to work. RSA annually funds an Institute on Rehabilitation Issues (IRI). In fiscal year 1990, the topic of the study was "Aging in America: Implications for Vocational Rehabilitation and Independent Living." This study will assess demographic changes and the implications for rehabilitation, and explore issues concerned with the rehabilitation of older persons. A copy of the study report is expected to be available in the summer of 1991.

DISCRETIONARY PROGRAMS

RSA also administers grants for a number of discretionary programs in which older Americans may be served, such as Special Projects and Demonstrations for Severely Disabled Individuals, Special Recreation Programs, Centers for Independent Living, and Projects With Industry. These programs serve persons of any age.

The Independent Living Services for Older Blind Individuals program is one RSA program that specifically focuses on older persons. Blindness and visual impairment are clearly associated with increasing age. The purpose of this program is to provide or arrange for independent living rehabilitation services needed by older blind individuals in order to assist them in adjusting to blindness by becoming more independent in caring for their individual needs. Such services enable these persons to live more independently in their homes and communities with the maximum degree of self-reliance.

The population to be assisted under this program is defined by statute as individuals who are 55 years of age or older whose visual impairment makes gainful employment extremely difficult to attain but for whom independent living goals are feasible. Independent living services are appropriate for this population because these services can have a lasting and permanent impact on increasing personal independence and participation in family and community life.

One goal of this program is to reduce the possibility of premature or unnecessary institutionalization for participating individuals. In fiscal year 1990, this program funded the third year of 28 3-year projects, with an average award of \$200,000. Total funding for this program in fiscal year 1990 was \$5,827,000.

The North Carolina Division of Services for the Blind has developed a project under this program to establish mini-centers to provide comprehensive services to blind and visually-impaired individuals in both urban and rural settings. The mini-center has been defined as the "replication of typical rehabilitation centers for the blind," but it stresses the use of local community sites and resources. Participant trainees in this program receive initial training in case management and curriculum development. When training is completed, they return to their assigned areas and use demographic data to determine specific sites for these mini-centers. Vocational technical schools and community colleges are examples of the types of sites selected for mini-centers. Trained rehabilitation teachers, e.g., orientation and mobility specialists identify the types of staff to be utilized in their mini-center program for client training. Staff from other local agencies are recruited to augment the various instructional elements of the mini-center program. The independent living curriculum is designed to teach a broad range of skills to clients. Another feature of this grant is to train other professionals for outreach services. These professionals remain in their local communities, performing such functions as: (1) teaching clients in rural areas to increase their capacity to function more independently; (2) teaching clients who cannot attend a mini-center; and (3) conducting case follow-up.

The Kentucky Independent Living Center for the Blind serves the entire State. It has installed a toll-free telephone line to assist people with concerns about blindness. After negotiations with the local gas and electric utility in Louisville, the CIL enclosed an insert about its services with a billing from the utility. The CIL continues its participation in health fairs, health awareness and disability awareness sessions conducted by various hospitals, universities, and other institutions throughout the State.

The Disabled Citizens Alliance for Independence, Inc. (DCAI), in Viburnum, MO, is a center that provides services to people with sensory disabilities. The service-delivery area for this center is primarily rural. Among its recent accomplishments, DCAI has retained the services of a speech pathologist, networked with human service agencies to acquire adaptive equipment and other services for sensory-impaired participants to enhance their independence. Also, a community network was developed to provide suitable accessible housing and removal of physical barriers, which are of particular concern to older persons because of mobility impairments. The network also enhances maximum self-control/self-determination in getting to and from locations in both home and community.

The Projects With Industry (PWI) program also addresses the needs of older individuals with disabilities. The PWI program is designed to provide training and/or placement services for disabled individuals to assist them in obtaining gainful employment. The PWI program presently funds 125 grantees nationwide in its services delivery network. This effort spans a broad range of disabilities and age categories.

PWI has addressed the needs of a growing older disabled work population by continuing to fund the "Aging in America" (AIA) project in New York. The main purpose of this PWI project is to create employment opportunities for job candidates over the age of 45 who have been identified as having moderate to severe disabilities. AIA has targeted its services to three diverse, but equally important groups: employers, aging agencies, and rehabilitation professionals.

During the first months of 1990, AIA placed 125 older persons with disabilities into competitive employment. The average cost per placement was determined to be

approximately \$730.50. The average salary is over \$14,000 per placement. AIA and most PWI Programs are attempting to meet the increased needs and numbers of persons with disabilities, who are 45 years of age and older.

In fiscal year 1991, RSA will be funding new PWI projects through a binding priority addressing the needs of older workers.

OFFICE OF SPECIAL EDUCATION PROGRAMS

MEDIA SERVICES AND CAPTIONED FILMS PROGRAM

Program Purpose

Hearing impairments, like blindness, are closely associated with increasing age. The primary purpose of the Media Services and Captioned Films program, funded through OSERS' Office of Special Education Programs (OSEP), is to support and improve captioning of film and television productions to enable individuals with hearing impairments, many of whom are over age 65, to participate more fully in our national life. In practice, this includes both captioning and supporting distribution activities to ensure that films, television programs, and other media materials become available to people with serious hearing impairments.

Activities

In fiscal year 1990, this program provided: (1) ongoing support for the evaluation, selection, captioning, and distribution of captioned films for individuals who are deaf; (2) ongoing support for increased access to the television medium through the closed-captioning of national and local news, movies, public information, sports, syndicated, and children's programs; (3) continued subsidization for the closed-captioned television decoders; and (4) ongoing support for the National Theatre of the Deaf, Inc.

In addition, the Television Decoder Circuitry Act of 1990 requires that all new televisions manufactured or imported after July 1993 having screens 13 inches or larger must have built-in decoder circuitry to allow the display of closed-captions. While this Act is not administered by the Department, it is expected to have a strong effect on the demand for captioned programming. The availability of these new televisions, in conjunction with continued OSEP efforts to support closed-captioned television programs, assures that broad segments of the population representing the deaf and hard-of-hearing communities, senior citizens, the literacy and education community, particularly the literacy and foreign language segments, and individuals with limited English skills, will have access to the audio portion of television programming through closed-captioning. Nearly 40 percent of older Americans experience significant hearing loss. Now, for the first time, this population may benefit from closed-captioned technology with the push of a button.

NATIONAL INSTITUTE ON DISABILITY AND REHABILITATION RESEARCH

OSEP's National Institute on Disability and Rehabilitation Research, (NIDRR), authorized by Title II of the Rehabilitation Act, has specific responsibilities for the provision of a comprehensive and coordinated approach to the administration of research, demonstration projects and related activities for the rehabilitation of disabled persons, including programs designed to train persons who provide rehabilitation services and who conduct research. The Institute is also responsible for facilitating the distribution of information on developments in rehabilitation procedures, methods, and devices to rehabilitation professionals and to disabled individuals to assist such individuals in living more independent lives. The Institute supports several programs which are related to older persons.

REHABILITATION RESEARCH AND TRAINING CENTERS

These Centers serve as a national resource for the conduct of a full spectrum of rehabilitation research activities. NIDRR supports three Centers that focus on the rehabilitation of aging persons. Research is directed toward the identification of the rehabilitation needs of elderly persons and the development of appropriate rehabilitation techniques. Research is conducted in settings where patient/client services, research, and training are viewed as interdependent activities essential to maximizing the rehabilitation of disabled individuals. The rationale for this operational approach is the belief that research cannot be isolated and still be utilized effectively.

1. *Rancho Los Amigos Rehabilitation Research and Training Center on Aging*, Rancho Los Amigos Medical Center, University of Southern California, Downey, CA. This Center is a collaborative effort between the Rancho Los Amigos Rehabilitation Hospital and the School of Medicine of the University of Southern California. Re-

search is focused on medical, functional, psychological, social, policy and service-delivery issues. The Center's training activities are designed to improve knowledge and skills regarding rehabilitation and the older person and are targeted to students and practitioners in rehabilitation and other health-related disciplines.

Current Research Activities at Rancho:

- Studies on the late effects of early-life disability are comparing older persons with early-life onset of spinal cord injury and polio, and assessing their medical, psychological, social and rehabilitation service needs and how these needs should be addressed;
- Research on the attitudes of and toward disabled older persons is examining the impact of these attitudes on effective service delivery and rehabilitation success;
- Studies on technical social solutions for older persons are developing and evaluating the benefits of a Sub-Center on Technology within a rehabilitation program; and
- Research on policy and funding alternatives to promote community and supportive services of older persons with disabilities is examining the various policies and funding and their impact on the rehabilitation of older persons.

2. *Rehabilitation Research and Training Center on Aging, University of Pennsylvania*, Philadelphia, PA, is jointly supported by the National Institute on Disability and Rehabilitation Research and the National Institute on Aging. Research is addressing the rehabilitation needs of disabled persons who become elderly as well as those who become disabled after they become elderly with the purpose of restoring, preserving, or enhancing the older person's ability to function productively and independently. The Center's training activities include training for service delivery providers, and academic training for the university community.

Current Research Activities at University of Pennsylvania:

- Designing and evaluating geriatric-rehabilitation co-services for frail elderly persons suffering functional decline but who do not qualify for inpatient services;
- Teaching functional assessment and independent living techniques to nurses aides working in nursing homes and assessing the impact of such training on the functional status of older persons;
- Determining the prevalence of silent ischemia in the population of older rehabilitation candidates and identifying those persons who would benefit from a modified rehabilitation program designed to lessen cardiac risk; and
- Designing and evaluating optimal muscle strengthening programs in order to design appropriate rehabilitation programs.

3. *Rehabilitation Research and Training Center on Community Integration of Elderly Persons With Mental Retardation and Other Disabilities*, University Affiliated Cincinnati Center for Developmental Disorders, and the University of Akron, OH. In conjunction with the University Affiliated Programs (UAP) in Illinois, Indiana, Kentucky, Minnesota, and Wisconsin, this Center is focusing on improving the community integration of elderly persons with mental retardation and other developmental disabilities.

REHABILITATION ENGINEERING CENTERS

Rehabilitation Engineering Centers conduct programs of advanced research of an engineering or technical nature which can be applied toward solving problems encountered in the rehabilitation of disabled persons. The Centers are also encouraged to develop systems for the exchange of technical and engineering information, and to improve the distribution of technological devices and equipment to disabled persons.

In response to public perceptions that technology has been used in rehabilitation to help reduce the adverse effects of impairment and disability in younger persons, but has not been widely used to solve the problems in geriatric rehabilitation, the National Institute on Disability and Rehabilitation Research has announced a priority for a Rehabilitation Engineering Center on Technology for Older Persons. The Center, when funded, will focus on rehabilitation technologies and their applications to the special needs of older disabled persons.

RESEARCH AND DEMONSTRATION PROJECTS

This is a program encompassing discrete research and demonstration projects primarily directed toward discovering new knowledge and overcoming significant information gaps in rehabilitation of severely disabled persons.

Given the significant shift in the demography of the aging population and the clear association between visual impairment and aging, the National Institute on Disability and Rehabilitation Research is planning to announce a research priority which will address the multifaceted rehabilitation needs of the older visually-impaired person.

FIELD-INITIATED RESEARCH

The purpose of NIDRR's Field-Initiated Research program is to encourage eligible applications to originate valuable ideas that relate to the rehabilitation of disabled persons from the field. These are discrete, specified projects in an area representing the interests of both the investigator and the Institute. Currently supported projects which address aging are:

- The Health and Functional Status of Aging Spinal Cord Injured Person;
- Evaluation of Adaptive Device Use by Older Adults with Mixed Disabilities;
- Evaluation of Methods for the Identification and Treatment of Visually Impaired Nursing Home Residents;
- Rehabilitation of Reading for Low Vision Individuals with Macular Loss; and
- Chronic Pain Rehabilitation in the Elderly.

OFFICE OF POSTSECONDARY EDUCATION

The Office of Postsecondary Education administers programs designed to encourage participation in higher education by providing support services and financial assistance to students.

If fiscal year 1990, and estimated \$18 billion was made available in financial aid to students through the student assistance programs. Data on the age of recipients of financial aid are not generally available. However, data for the Pell Grant program, the largest grant program, indicate that 5 percent of all recipients were over age 40.

The Special Programs for the Disadvantaged, commonly known as the "TRIO" programs, provide support services to those interested in pursuing a baccalaureate education, enrolled in baccalaureate education, or wishing to pursue a graduate or professional degree. Because age is not an eligibility criterion under most of these programs, data on the age of participants is not available.

In addition to these types of programs, the Office of Postsecondary Education has supported innovative approaches to meeting the needs of older Americans through the Fund for the Improvement of Postsecondary Education (FIPSE). In fiscal year 1990, FIPSE supported four projects dealing specifically with our aging population. These projects are:

National Center for Transition to Teaching (American University); Studies the feasibility of a program to recruit and train career switchers and early retirees from government agencies and the military. The envisioned program will offer students an MA and teaching certification. Students will be prepared for positions in needed subject areas. National dissemination program will be implemented.

Senior Faculty Monitoring Program (Temple University); Establishes a Senior Teacher Mentoring Service using recently retired senior faculty as mentors for new and junior faculty. The project will focus on effective teaching and will give junior faculty access to the wisdom and experience of proven master teachers while enabling retired faculty to remain professionally productive.

Elder Serve (Kansas State University); The Kansas State developed Elderserve, a project designed to provide students with intergenerational learning opportunities, while working to meet the needs of older residents in rural communities. Now in its second year, Elderserve has developed partnerships with 19 rural communities, four community colleges, and four Area Agencies on Aging.

Coordinated Student Involvement in Elder Care (Foundation for Long Term Care); The Foundation has established a consortium of 11 elder care agencies and 3 colleges to provide hands-on experience of students with issues related to health care practices and policies for the elderly. Participating students work between 6 and 12 hours a week in an agency and receive competitive wages. The work experience is combined with an undergraduate seminar on long-term care issues.

LIBRARY PROGRAMS

STATE ADMINISTERED PROGRAM

Section 2(a)(2) of Public Law 101-254, the Library Services and Construction Act, authorizes the provision of funds to support improving State and local public library services for older Americans. Library services to the elderly is one of the priorities of Title I of the Library Services and Construction Act (LSCA), a State-formula grant program administered by Library Programs in the U.S. Department of Education. Annual reports on projects conducted at regional or local public libraries, funded in whole or in part with Federal funds under LSCA, are submitted by the State Library Administrative Agencies to the Library Programs office.

Statistics for projects completed in fiscal year 1989 (the latest year for which such data are available), indicate that \$2,152,964 in LSCA funds were expended nationwide for individual library projects specifically aimed at serving the elderly. This amount was matched by \$871,161 in State funds and \$6,049,859 in local funds, for a total of \$9,073,984.

Support was provided to purchase special materials such as large-print books, audio cassettes, vision aids, and health-related or other materials of special interest to the elderly. Additionally, support was provided for special programs on health issues for the elderly, talking books, projects to combat illiteracy, and to deliver reading materials to senior citizens' centers or homes. Assistance also was provided to libraries to develop intergovernmental programs matching older adult volunteers with libraries offering after school literacy and reading skills programs for unsupervised school children after school hours.

Discretionary Programs

Under the Library Services and Construction Act, Title VI, the Library Programs office administers the Library Literacy Program which has been funded at approximately \$5 million since it began in fiscal year 1986. While the program serves adults who wish to improve their literacy skills, 3 percent of the funded projects in fiscal year 1989 had a component specifically targeted to older adults for activities such as: (a) providing tutoring and literacy materials at senior centers; (b) conducting needs assessments to provide appropriate adult basic reading materials for senior citizens in long-term care facilities; (c) offering a statewide workshop for librarians and literacy providers to organize and operate a seniors-teaching-seniors program; and (d) collaborating with senior groups to promote literacy programs. In addition, Library Programs administers the LSCA, Title IV, Library Services to Indian Tribes and Hawaiian Natives Program which also supports projects serving all age groups. Outreach to tribal elders is an important component of these projects.

ADULT EDUCATION

The U.S. Department of Education is authorized under the Adult Education Act, to provide funds to the States and outlying areas for educational programs and support services benefiting all segments of the eligible adult population. The purpose of the Act is to encourage the establishment of programs for adults 16 years of age or older who are beyond the age of compulsory school attendance under State law which will:

- (1) Enable adults to acquire the basic educational skills necessary for literate functioning;
- (2) Provide sufficient basic education to enable these adults to benefit from job training and retraining and to obtain productive employment; and
- (3) Enable adults to continue their education to at least secondary level completion.

In addition to adults who have not completed secondary school, adults who have completed the secondary level but are functioning at a lower level are also eligible to participate in the program. Students seeking employability skills may also be given training that will help them to become more employable, productive, and responsible citizens.

Federal funds support up to 90 percent of the cost of each State's program for the 1988 and 1989 grant years; 85 percent for 1990; 80 percent for 1991; and 75 percent for 1992 and thereafter. Federal funds also support up to 100 percent of the program's cost in outlying areas. At least 10 percent of each State's allotment must be used for special experimental demonstration projects and teacher training, and at least 10 percent must be used for corrections education and education of other insti-

tutionalized adults. In addition to the basic State-administered program, the Act authorizes funds for workplace literacy and English literacy. The Act also authorizes various national programs including a Research and Evaluation program.

In order to discuss the specifics of the efforts aimed at older adults, one must first be aware of demographic changes that have had a profound impact upon this group. According to the 1980 census, the median age of the U.S. population in 1980 was 30.1 years. In 1990, estimates place the median age at 33 years. This "graying" of the U.S. population will inevitably continue for several decades after 1990. With the decline of the number of young workers, the average age of the workforce will rise significantly. In addition to this significant demographic change, by the year 2000, technological changes and the continued shift of jobs to the service sector will reduce the need for unskilled workers and increase the need for workers with higher skill levels. Many of the emerging workforce participants, including a large number of older adults, lack the basic literacy skills necessary to meet the increased demands of rapid change and new technology. Thus, employers will have to make training and retraining a priority in order to upgrade the labor force.

The education of older persons has rarely ranked highly as an educational priority in the United States, although the 1990's may well be considered the decade of growth in educational gerontology. Demographics have tended to make this development inevitable. In 1980, nearly half of the 15.6 million adults 70 years old and over, and about 36 percent of the 8.6 million adults age 65 to 69, had had 8 years of schooling or less (1980 census data). While these rates will have improved by the 1990 Census, the rates will still be much higher than for younger age groups. Such high rates of under-education indicate a need for emphasizing effective basic skills and coping strategies in programs for older adults.

The adult education program, which is administered by the Office of Vocational and Adult Education, is charged with addressing the needs of under-educated adults. In 1989, the total number of participants in the program was 3.3 million. The number of participants in the 45-to-59 year range was estimated to be 370,942 and that of the group 60 or older was 171,617. Currently, some 16.7 percent of persons in adult education programs are 45 years of age or older. According to 1982 census data, nearly one-third of all adult illiterates are aged 60 or over. In response to these data, the Department of Education's Division of Adult Education and Literacy has focused attention on this serious problem.

The adult education program addresses the needs of older adults by emphasizing functional competency and grade level progression. States operate special projects to improve services for older persons through individualized instruction, use of print and audio-visual media, home-based instruction, and through curricula focused on coping with daily problems in maintaining health, managing money, using community resources, understanding government, and participating in civic activities.

Equally significant is the expanding delivery system, increased public awareness, as well as clearinghouses and satellite centers designed to overcome barriers to participation. Where needed, supportive services such as transportation and lunch are provided, as are outreach activities adapting programs to the life situations and experiences of older persons. Self-learning preferences are recognized and assisted through the provision of information, guidance and study materials. To reach more people in the targeted age range, adult education programs often operate in conjunction with senior citizens centers, nutrition programs, nursing homes, and retirement and day care centers.

In conclusion, the Federal adult education program will continue seeking to meet the learning needs of older Americans. Increased cooperation among organizations, institutions and community groups involved in this area at the national, State, and local levels should lead to increased sharing of resources and improved services.

ENFORCEMENT OF THE AGE DISCRIMINATION ACT BY THE DEPARTMENT OF EDUCATION

The Department of Education's (ED) Office for Civil Rights (OCR) is responsible for enforcement of the Age Discrimination Act of 1975 (Act), as it relates to discrimination on the basis of age in federally funded education programs or activities. The Act contains certain exceptions which permit, under limited circumstances, continued use of age distinctions or factors other than age that may have a disproportionate effect on the basis of age.

The Department of Health and Human Services (HHS) has published a general governmentwide regulation. Each agency that provides Federal financial assistance must publish a final agency specific regulation. In March 1990, ED's Final Rule implementing the Age Discrimination Act of 1975 was submitted for review to the Secretary of HHS and conditional approval was granted on December 14, 1990. Upon

final approval by HHS, the Final Rule will be transmitted to the Office of Management and Budget for review prior to publication. ED is enforcing the Act under the general governmentwide regulation until an ED specific regulation is published.

The Act gives OCR the authority to investigate programs or activities receiving Federal financial assistance from ED. OCR does not have the authority to investigate employment complaints under the Act. Employment complaints either are sent to the Equal Employment Opportunity Commission (EEOC), which has jurisdiction under the Age Discrimination in Employment Act of 1967 (ADEA) for certain types of age discrimination cases, or are closed using the procedures described below.

Under the governmentwide regulation, OCR forwards complaints alleging age discrimination to the Federal Mediation and Conciliation service (FMCS) for resolution through mediation. FMCS has 60 days to mediate the age-only complaints or the age portion of multiple-base complaints. For complaints alleging discrimination on the basis of age and another jurisdiction (i.e., Title VI of the Civil Rights Act of 1964, which prohibits discrimination on the basis of race, color, and national origin; Title IX of the Education Amendments of 1972 which prohibits discrimination on the basis of sex; and/or Section 504 of the Rehabilitation Act of 1973, which prohibits discrimination on the basis of physical and mental handicap), the applicable OCR case processing time frames are tolled for 60 days (or until the complaint is returned from FMCS, whichever is earlier) to allow FMCS to process the age portion of the case. OCR notifies the complainant(s) of the duration of the tolling of the time frames.

If FMCS is successful in mediating a complaint filed solely on the basis of age within the 60 days allowed, OCR closes the case. If the case is not resolved, OCR investigates the allegations in accordance with the applicable OCR case processing time frames. If the case was filed on the basis of age and another jurisdiction (e.g., Title VI), an attempt first is made by FMCS to mediate the age portion of the age portion of the case, as described above. If FMCS is successful in mediating the age portion of the case within the 60-day time limit, OCR then processes the other allegations in the complaint within the applicable OCR case processing time frames. If FMCS is unsuccessful in mediating an agreement between the complainant and the recipient on the age portion of the complaint and the recipient on the age portion of the complaint, the case is returned to OCR, and OCR processes the complaint allegations in accordance with the applicable OCR case processing time frames.

In fiscal year 1990, OCR facilitated its working relationship with FMCS by designating regional contact persons who coordinate directly with FMCS and by modifying the procedures for referral of age discrimination complaints to FMCS for mediation. OCR now accepts verbal or facsimile referrals from FMCS after unsuccessful attempts at mediation, and grants FMCS extensions of up to 10 days beyond the 60-day mediation period on a case-by-case basis when mediated agreements appear to be forthcoming.

Age complaints involving employment filed by persons over the age of 40 are referred to the appropriate EEOC regional office under the ADEA, and the OCR file is closed. EEOC does not have jurisdiction over age/employment complaints that involve persons under 40 years of age. If the complainant is under 40 years of age, and the complaint filed with OCR alleges only employment discrimination, the complainant is informed that there is no jurisdiction under ADEA, and the case is administratively closed.

OCR received 163 age complaints in fiscal year 1990. Of these, 58 were age-only complaints and 105 were multiple bases complaints. As shown on Table 1, below, 94 of the 163 receipts were processed in OCR and 70 were referred to other Federal agencies for processing. The most frequently cited issue in the fiscal year 1990 age complaint receipts was "selection for enrollment in education programs."

TABLE 1.—Fiscal year 1990 age-based complaint receipt

Processed in OCR.....	94
Referred to FMCS.....	32
Referred to EEOC.....	29
Referred to other Federal agencies.....	8
Total receipts.....	163

FMCS successfully mediated six of OCR's complaints during fiscal year 1990. The issues of the cases were "application and selection for enrollment in education programs," "curriculum requirements," "academic evaluation and grading," and "student rights." After unsuccessful mediations, FMCS returned 22 other age-based complaints to OCR for processing, including complaints that OCR had referred to FMCS

in a previous fiscal year. Most of these 22 cases involved the issues of "selection for enrollment in education programs," and "academic evaluation and grading."

During fiscal year 1990, OCR closed a total of 171 age-based complaints, including 56 age-only complaints and 115 multiple-based age complaints. As shown on Table 2, below, the majority of the complaints were closed for administrative reasons.

TABLE 2.—Fiscal year 1990 age-based complaint closures

	Number of Closures
Administrative closures—113:	
No jurisdiction, but referred to another agency.....	40
No jurisdiction, no referral.....	26
Untimely complaint receipts.....	14
Incomplete complaints.....	12
OCR has jurisdiction, but another agency will process.....	8
Other administrative reasons.....	13
Substantive closures—58:	
OCR's investigation found no violation.....	36
Complaint was withdrawn after achieving change.....	10
Remedial action was completed or agreed upon.....	11
Mediation by another agency achieved change.....	1
Total closures.....	171

Of the 58 substantive closures, change was achieved in 21. The most frequently cited issues in the cases with change were "selection for enrollment in education programs" and "health benefits and services."

At the end of fiscal year 1990, there were 52 age-based complaints pending in OCR, including 14 that had been returned to OCR by FMCS for processing. OCR confined its age discrimination compliance activities to complaint investigations; no compliance reviews on age discrimination were conducted in fiscal year 1990.

However, during the course of the year, OCR provided training on the Age Discrimination Act and the governmentwide regulation for nine headquarters attorneys hired in fiscal year 1990 and for 20 staff members of its temporary Headquarters Compliance Unit. OCR also began the development of a pamphlet for the public on age discrimination in education. The pamphlet will be published after ED's final Age regulation is approved. OCR also responded to seven requests by ED beneficiaries for technical assistance on age discrimination issues during fiscal year 1990.

ITEM 5. DEPARTMENT OF ENERGY

DECEMBER 12, 1990.

DEAR MR. CHAIRMAN: In response to your letter of September 24, 1990, requesting an update of the Department's current and upcoming activities of particular interest to older Americans, I am submitting the following enclosure that describes Departmental activities in areas of energy efficiency programs, information collection and distribution, public participation, and research on the biological and physiological aging process.

I am pleased to contribute to your annual report of Federal activities and programs of interest and assistance to older Americans.

Sincerely,

JAMES D. WATKINS,
Admiral, U.S. Navy (Retired).

Enclosure.

INTRODUCTION

The mission of the U.S. Department of Energy (DOE) is to design energy policies and programs in support of the President's broad objectives for America's future: sustained, noninflationary economic growth; good stewardship of the environment; and long-term strategic security. At the President's direction, Secretary of Energy James D. Watkins has initiated the development of a National Energy Strategy (NES). This strategy will be based on public input through hearings, written submissions, publicly available reports and internal deliberations, all aimed at reconciling the Nation's need for secure, competitively priced supplies of energy with environmental, health and safety requirements.

A first round of NES public hearings was conducted in the summer and fall of 1989. These hearings focused on regional energy issues. A second round of hearings took place around the country from December 1989 to February 1990. The second

round of hearings was devoted to specific energy topics, such as the domestic energy resource base, energy productivity, energy tax policy, the role of science, and the relationship of energy to agriculture, national defense, transportation, and the environment.

As important as the public hearings were, they are only one of the mechanisms DOE is using to involve the public in the NES development process. The Department has received and reviewed more than 1,000 written submissions, including myriad ideas for various energy plans ranging from comprehensive strategies to specific suggestions. The Department has also reviewed many publicly available studies, such as those prepared by the National Research Council.

An interim report on the NES was issued for public comment on April 2, 1990. In releasing the interim report, Secretary Watkins said, "This process is unique at the Federal level; this is the first time in my memory that the Federal Government has involved the public in such a direct way in the development of a national strategy. It is really an 'A to Z' lesson in energy. The problems, prospects, and preferences contained in this report are all drawn directly from the public record," Secretary Watkins added.

The Department expects to submit the first edition of the NES to the President in December 1990.

The following provides a survey of DOE programs and activities of particular interest to senior citizens.

ENERGY-EFFICIENT PROGRAMS

Weatherization Assistance Program.—The elderly and the handicapped receive priority under this program which provides grants to States for the installation of insulation, weatherstripping, storm windows, heating and cooling system modifications, and other energy-saving measures in low-income homes.

In 1990, the Weatherization Assistance Program awarded \$161,964,000 of appropriated funds in grants to the 50 States, the District of Columbia, and nine Native American tribal organizations for the weatherization of homes of low-income families. Reports submitted from the inception of the program through June 1990, indicate that about 3,372,544 homes were weatherized and approximately 1,723,515 of those dwellings were occupied by elderly persons.

State Energy Conservation Program.—The State Energy Conservative Program (SECP) was created to promote efficiency and reduce the growth rate of energy demand in States. Under this program, States voluntarily enter into a cooperative effort with the Federal Government, under which DOE provides technical and cost-shared financial assistance, and the States develop and implement comprehensive plans for specific energy goals. At present, all States, the District of Columbia, and U.S. territories participate in SECP.

The Energy Extension Service (EES) is a Federal/State partnership established by the National Energy Extension Service Act of 1977 to provide small-scale energy users with personalized information and technical assistance to facilitate energy conservation and the use of renewable resources. Started as a 2-year project in 10 States, the program was expanded nationwide by Congress after an evaluation demonstrated its effectiveness. All States, as well as U.S. territories and the District of Columbia, receive cost-shared grants to help individuals, small businesses, and local governments take practical conservation steps.

Senior citizens are eligible for services provided through SECP and EES (directly or indirectly). In addition, many States have developed and implemented projects specifically for this population sector. Examples include senior weatherization and training, hands-on energy conservation workshops, low-interest loan programs, senior energy savings months, and numerous seminars addressing the varied needs of senior citizens. These projects are often co-sponsored with agencies whose primary focus is on senior citizens.

INFORMATION COLLECTION AND DISTRIBUTION

The Energy Information Administration collects and publishes comprehensive data on energy consumption in the residential sector through the Residential Energy Consumption Survey (RECS) and the Residential Transportation Energy Consumption Survey (RTECS). The RECS includes data collected from individual households throughout the country, along with actual billing data from the households' fuel suppliers for a 12-month period. The data include information on energy consumption, expenditures for energy, cost by fuel type, and related housing unit characteristics (such as size, insulation, and major energy-consuming appliances).

The RTECS collects data on characteristics of household vehicles and annual miles traveled. The RECS and the RTECS contain data pertaining to the elderly.

The results of these surveys are analyzed and published by the Energy Information Administration. The most recent RECS is currently being conducted for calendar year 1990. Results of the 1987 RECS are reported in three publications: *Housing Characteristics 1987* (published May 1989); *Household Energy Consumption and Expenditures 1987 Part 1: National Data* (published October 1989); and *Household Energy Consumption and Expenditures 1987 Part 2: Regional Data* (published January 1990). Results from the 1990 RECS will be published in 1992. The next RECS will be conducted in the fall of 1993 using a sampling frame based on the 1990 census results.

Housing Characteristics 1987 provides data, categorized by age of householder, on energy-related characteristics of housing including the square footage of the housing unit and types of fuels used.

Household Energy Consumption and Expenditures 1987 Part 1: National Data provides estimates of consumption and expenditures of electricity, natural gas, fuel oil, kerosene and liquefied petroleum gas for elderly households. Also included in the report is a discussion of energy use and the elderly which indicates that in 1987, the elderly used about 10 percent more energy to heat their homes than the nonelderly, even after adjusting for weather and size of housing unit. Overall energy expenditures were less for the elderly for all end uses except space heating, where they spent 13 percent more for home heating. Approximately 61 percent of the elderly's total energy consumption used was for space heating and about 38 percent of their total energy expenditures used were for heating.

Household Energy Consumption and Expenditures 1987 Part 2: Regional Data provides energy consumption and expenditure data by four census regions and nine census divisions. These data are also presented by age of householder.

The most recent RTECS was conducted in 1988. Results of this survey are published in *Household Vehicles Energy Consumption 1988* (published February 1990). This publication presents data, categorized by age of householder, on vehicle characteristics, vehicle miles traveled, gallons of motor vehicle fuel consumed, and expenditures for motor vehicle fuel. The next RTECS will be conducted in 1991. Data from the 1988 RTECS show that the elderly drove fewer miles and used less vehicle fuel per household than the nonelderly. Vehicle fuel consumption and average miles traveled also differed among the elderly. Households with only one elderly adult spent an average of \$426 per household for vehicle fuel and drove 7,229 miles compared to two-adult households with a 60-year or older householder. These households drove an average of 14,058 miles and spent about \$808 per household.

The published reports can be obtained from the Superintendent of Documents, U.S. Government Printing Office, Washington, D.C. 20401 and from the National Energy Information Center, 1000 Independence Avenue, S.W., Washington, D.C. 20585.

PUBLIC PARTICIPATION ACTIVITIES

During fiscal year 1990, the DOE continued to work with the National Energy and Aging Consortium, Inc. (NEAC), a network of more than 50 organizations from the public and private sectors. The NEAC is unique in that it brings Federal agencies together with national aging organizations and the private sector to discuss and implement solutions to the energy-related needs of the elderly.

The Office of Consumer and Public Liaison has represented the Department by serving on the Federal Advisory Committee to the NEAC. Through participation in this group, DOE continues to exercise leadership in forming partnerships with a variety of organizations that have worked with elderly citizens to assist with their energy needs and concerns.

The NEAC leadership, including DOE's representative, met with Commissioner on Aging, Dr. Joyce Berry on January 17, 1990, to explore opportunities for collaboration between these two organizations. As one outcome of this meeting, officials of DOE's Office of the Assistant Secretary for Conservation and Renewable Energy have had continuing discussions with Administration on Aging (AOA) representatives on developing a memorandum of understanding between DOE and AOA.

On October 2, 1990, President Bush proclaimed October as Energy Awareness Month. The NEAC held its quarterly meeting and luncheon in connection with Energy Awareness Month. Following the luncheon, Ms. Mary McMaster, Project Manager for the Aging Futures Project at United Way of America, Inc., conducted a seminar which highlighted an important new computer program of great interest to specialists in aging. Developed by the United Way and The Futures Group, this computer forecasting model uses data from county, State, and Census Bureau popu-

lation figures to incorporate a community's overall population, fertility rate, mortality rate and migration to project information about the health, financial status, and number of older Americans in a given community through the year 2050. The model can also incorporate energy consumption rates in its projections.

Throughout the year, the DOE's staff has maintained open channels of communication with Federal agencies and departments to improve information exchange about energy assistance programs. This information exchange gives particular emphasis to programs that allow for attention to the elderly.

RESEARCH RELATED TO BIOLOGICAL AGING

In 1990, the Office of Health and Environmental Research (OHER) administered research that used the DOE's unique laboratory capabilities, and university-based research, to understand basic biological principles and the health effects of radiation and energy-related chemicals. As part of its overall research program, DOE sponsors two categories of studies that are peripherally related to biological aging. These are studies indirectly concerned with biological changes occurring over long periods of time and studies to elucidate the biological processes, including those of aging. The Department continues to characterize long-term, late-appearing effects induced by chronic exposure to low levels of physical agents. Because health effects caused by chronic low-level exposure to energy-related toxic agents may develop over a lifetime, they must be distinguished from normal aging processes. To distinguish between induced and spontaneous changes, information on changes that occur throughout the lifespan is collected for both experimental and control groups. These data help to characterize normal aging processes as well as the toxicity of energy-related agents. As in the past, lifetime studies of humans and animals constitute the major research related to biological aging. Research directly concerned with the aging process has been conducted at several of the Department's contractor facilities. Summarized below are specific research projects addressing aging that the Department sponsored in 1990.

Long-Term Studies of Human Populations

The DOE supports epidemiological studies of health effects in humans who may have been exposed to chemicals and radiation. Information on lifespan and aging in human populations is obtained as part of these studies. Because long-term studies of human populations are difficult and expensive, they are initiated on a highly selective basis.

The Radiation Effects Research Foundation (RERF), sponsored jointly by the United States and Japan, continues work on a lifetime follow-up of survivors of atomic bombings that occurred in Hiroshima and Nagasaki in 1945. Over 100,000 persons are under observation in this study.

An important feature of this study is the acquisition of valuable quantitative data on dose-response relationships. Studies specifically concerned with age-related changes are also conducted. No evidence of radiation-induced premature aging has been obtained.

After being accidentally exposed in 1954 to radioactive fallout released during the atmospheric testing of a thermonuclear device, a group of some 200 inhabitants of the Marshall Islands has been followed clinically, along with unexposed controls, by medical specialists at the Brookhaven National Laboratory. Thyroid pathology, which has responded well to medical treatment, has been prevalent in individuals heavily exposed to radioiodine. This study is currently conducted under the auspices of the Department's Office of Environment, Safety and Health.

Nearly 2,000 persons exposed to radium, occupationally or for medical reasons, have been studied at the Center for Human Radiobiology, Argonne National Laboratory.

Other studies currently involving the Department include:

- A Los Alamos National Laboratory epidemiologic study of plutonium workers at three DOE facilities. An estimated 15,000 to 20,000 workers will be followed in this retrospective mortality study.
- A study of some 600,000 contractor employees at DOE facilities who are being analyzed in an epidemiologic study to assess health effects produced by long-term exposure to low-levels of ionizing radiation.
- The U.S. Uranium/Transuranium Registry, which is operated by the Hanford Environmental Health Foundation, is collecting occupational data (work, medical, and radiation exposure histories) as well as information on mortality in worker populations exposed to plutonium or other transuranium radioelements.

Lifetime Studies in Short-Lived Mammals

Although epidemiological data from humans are preferable in assessing health effects of chemicals or radiation in humans, their limitations necessitate acquiring supportive data from animal studies.

Studies of small rodents with lifespans of 2 to 3 years provide such supportive data. DOE has, therefore, used them in large-scale studies of the effects induced by low doses of ionizing radiation.

Lifetime Studies With Long-Lived Mammals

Longer-lived mammals (such as dogs) may represent better human surrogates for chronic diseases than do shorter-lived animals. Because of this, obtaining data on responses of longer-lived species to hazardous agents is important. DOE initiated several studies using dogs several decades ago. These continue at the Argonne National Laboratory, Lovelace Inhalation Toxicology Research Institute, and Pacific Northwest Laboratory. This research increases our knowledge of lifespan, age-related changes, morbidity, mortality, and causes of death, as well as alterations in these characteristics that may be induced by radiation. Because of changes in its research goals and directions during the last few years, no additional studies in dogs have been initiated by DOE.

Research Directly Concerned With Aging

Interest in biological aging has continued in several of DOE laboratories and has resulted in additional research at the molecular, cellular, and organismal levels of biological organization. Examples include: research at the Lovelace Inhalation Toxicology Research Institute on effects of age on lung function and structure of adult animals, and the study and diagnosis using radiopharmaceuticals and new imaging devices of age-related dysfunctions of the brain and heart, including senile dementia, Alzheimer's disease, stroke, and atherosclerosis.

Trends and Prospects

Given the need to assess long-term and late-appearing effects of chemicals and radiation associated with energy, lifetime studies of animal and human populations will continue. However, there is a critical need for better methods to appraise and predict effects of exposure to low levels of chemicals and radiation. The DOE research in areas of basic biological principles, gene sequencing and structural biology should ultimately lead to better understanding of such effects. Although lifetime studies involving short-lived species will continue, no new lifetime studies involving long-lived mammals are planned. Research to understand molecular and cellular mechanisms, including aging, will continue, as will studies to sequence the human genome. The latter can be expected to result in new insights into the genetic aspects of aging. As a result, additional information on age-related changes in both animals and humans should be produced.

ITEM 6. DEPARTMENT OF HEALTH AND HUMAN SERVICES

DECEMBER 20, 1990.

DEAR MR. CHAIRMAN: On behalf of Secretary Sullivan, I am submitting the Department of Health and Human Services' annual report for 1990 summarizing the Department's activities on behalf of older Americans. We are pleased that we could be of assistance in developing this material for inclusion in Volume II of the Committee's annual report, *Developments in Aging*.

I hope the enclosed information will be of value to the Committee. Should your staff need further assistance, the point of contact of my staff is Barbara Clark on 245-6311.

Sincerely,

STEVEN B. KELMAR,
Assistant Secretary for Legislation.

Enclosures.

HEALTH CARE FINANCING ADMINISTRATION

LONG-TERM CARE

The mission of the Health Care Financing Administration (HCFA) is to promote the timely delivery of appropriate, quality health care to its beneficiaries—approximately 50 million aged, disabled, and poor Americans.

Medicaid and Medicare are the principal sources of funding for long term care in the United States. The primary types of care reimbursed by these programs of HCFA are skilled nursing facilities (SNF's), intermediate care facilities (ICF's), and home health services.

HCFA's Office of Research and Demonstrations (ORD) conducts research studies of a broad variety of issues relating to long term services and their users, providers, costs, and quality. ORD also conducts demonstration projects that demonstrate and evaluate optional reimbursement, coverage, eligibility, and management alternatives to the present Medicaid and Medicare programs.

RESEARCH ACTIVITIES

Long term care research activities in ORD can be classified according to five objectives:

- examining and promoting alternatives to institutional long term care;
- assessing and evaluating long term care programs in terms of costs, effectiveness, and quality;
- examining the effect of the hospital prospective payment system (PPS) on long term care providers;
- examining alternative payment systems for long term care; and
- supporting data development and analyses.

Prior research in long term care has highlighted the fact that disabled individuals prefer to remain in the community as long as possible and that they are able to do this, in large part, due to the care provided by informal caregivers, usually family. For a number of years, ORD has been funding research that has been examining the amount and types of services provided by family members. This research is continuing and includes examination of contributions from both public programs and private individuals (e.g., family members) for the support of the disabled in the community. Information is being sought about the resources needed to support the informal caregiver network in its efforts to avoid unnecessary institutionalization of relatives.

Because of the interest in promoting noninstitutional care, and the recent increase in the utilization of these services, ORD's research is also examining the quality and effectiveness of the services in the home setting. These efforts include comparison of the quality, case mix, and cost of noninstitutional as compared to institutional services, as well as the examination of home care provided under different payment arrangements, e.g., fee-for-service versus capitation. As part of these efforts, groupings of patients are being developed that have similar expected outcomes. Such groupings are essential since home health care serves so many different types of patients, some of whom may fully recover and some who, even under the best of circumstances are still expected to continue to decline.

A major responsibility of ORD is assessing the effects of various Medicare and Medicaid long term care programs and policies. Among the areas where results are available are the hospice, swing bed, and home- and community-based waiver program.

Since the implementation of PPS for paying hospitals, ORD has been assessing the effects of this change on other parts of the health care system. Included in this research is the examination of the effects of PPS on long term care case mix, utilization, costs, and quality. Changes in the supply of long term care providers are also being studied. Major research projects are underway to analyze the appropriateness of post-hospital care and the course and outcomes of that care. In recent years, there has been increased emphasis on examining episodes of care rather than utilization of just one type of service. Medicare files, which link hospital with post-hospital care, continue to be analyzed to provide information on trends in the utilization of post-hospital care since the passage of the PPS legislation.

DEMONSTRATION ACTIVITIES

Demonstration activities in ORD include the development, testing, and evaluation of:

- alternative methods of service delivery for post-acute and long term care;
- alternative payment systems for post-acute and long term care services; and
- innovative quality assurance systems and methods.

In 1990, HCFA began implementation of a major demonstration aimed at testing prospective payment for Medicare home health agencies. This program is being conducted in two phases. The first phases involves testing of prospectively established per-visit payment rates for Medicare covered home health visits. A second phase, scheduled to begin in late 1992, will test per-episode payment rates for an entire episode of Medicare covered home health service.

We also continued the implementation and operation of a major demonstration testing the effectiveness of community-based and in-home services for victims of Alzheimer's disease and other dementias. This project on the coordination and management of an approximate mix of health and social services directed at the individual needs of these patients and their families.

Demonstrations also are being implemented to assess the impact of innovative reimbursement strategies to promote cost containment and foster quality of care. ORD has devoted extensive effort to the testing of capitated payment system for a combination of acute and long term care services, including conducting and evaluating demonstration of Social/Health Maintenance Organization and implementing the Program for All-inclusive Care for the Elderly. Efforts are also underway to identify more effective long term care quality assurance techniques and to improve the statistics and baseline information upon which future assessment of needs, problem identification, and policy decisions will be based.

Information follows on specific HCFA research and demonstration.

Long-Term Care: Elderly Service Use and Trends

Period: August 1989-December 1990.

Total Funding: \$245,249.

Award: The Brookings Institution, 1775 Massachusetts Ave., N.W., Washington, D.C. 20036-2188.

Investigator: Joshua Wiener, Ph.D.

This project has three objectives:

An analysis of the financial status of nursing home users.

An analysis of the determinants of home care use.

Projections of the numbers and level of disability among the elderly and their use of long-term care services.

Data from the following major surveys will be used: the 1982-82 National Long-Term Care Surveys, the 1984-86 Supplement on Aging/Longitudinal Study of Aging, and the 1984 Survey of Income and Program Participation. Data will be analyzed using cross-tabulations, logistic and least squares regression analyses, and the Brookings/ICF simulation model (updated and revised).

Draft papers have been completed on the determinants of home care use and the relationship between informal and formal home care use. The other papers will be completed by the end of 1990.

The project applies event history analyses to nationally representative data sources to derive estimates of the transitions between various health status categories and the duration within categories for different age groups. These data sources include: multiple years of National Health Interview Surveys, and mortality records, National Long-Term Care Surveys, Longitudinal Study on Aging, and the National Nursing Home Surveys. Researchers assigned to the project will also estimate, based on the type and level of severity of morbidity and disability categories, the risks involved and the duration of specific types of acute and long-term care.

Many of the key data sets have been formatted for analysis and initial analyses have been conducted. The final analyses will be completed by the end of 1990.

A National and Cross-National Study of Long-Term Care Populations

Period: September 1984-June 1990.

Total Funding: \$1,016,587.

Award: Cooperative Agreement.

Awardee: Duke University, Center for Demographic Studies, 2117 Campus Drive, Durham, North Carolina 27706.

Investigator: Kenneth Manton, Ph.D.

Based on data from the 1982 and 1984 National Long-Term Care Surveys, this project will forecast the size and the socioeconomic characteristics, health status, and cognitive and physical functioning capacities of the aged population in the United States into the middle of the 21st century. These projections are being compared with similar information from other countries. The findings will be useful for planning long-term care programs for functionally impaired aged persons. The project has been expanded to conduct additional analyses on:

Identifying clusters of characteristics that distinguish groups of functionally impaired aged persons living in the community and are associated with differential patterns of use and expenditures of home health care services.

Comparing hospital and post-hospital experiences of persons in the 1982 and 1984 National Long-Term Care Surveys and relating them to changes in their functional and health status in the interim. As an extension of this analysis, ascertaining whether there have been substitutions for different types of services over time in light of the patient's changed health and functional status. For example, are home health services used more in lieu of nursing home services?

Describing and comparing out-of-pocket health care expenses relative to aged person's health status, functional and cognitive disabilities, and access to informal caregiving services.

Massachusetts Health Care Panel Study of Elderly: Wave IV

Period: July 1984-January 1990.

Total Funding: \$152,408.

Awardee: Harvard University/Harvard Medical School, 1350 Massachusetts Avenue, Holyoke Center 458, Cambridge, Massachusetts 02138.

Investigator: Larry Branch, Ph.D.

This project collected the fourth wave of self-reported information from the Massachusetts Health Care Panel Study cohort, a group that was selected 10 years ago as a statewide probability sample of all persons 65 years of age or over. The data from the first three waves were analyzed and the results have been reported in numerous articles in professional journals. In this project, the data from all four waves were analyzed to determine markers of functional decline during pre-death, predictors of long-term care institutionalization, and interrelationships between physical, behavioral, and social characteristics and subsequent health care and social service utilization and mortality. Of the original 1,625 elderly respondents, 540 persons living in the community participated in this fourth phase of the study.

The final report, "The Massachusetts Health Care Panel Study Wave Four Prevalence Findings for People Aged 75 or Over," is available from the National Technical Information Service, accession number PB90-260043. Information is presented on respondents' demographic characteristics, limitations in performing activities of daily living and instrumental activities of daily living, their present and past health problems, mental health status, medical and dental care utilization and expenditures, receipt of social services, informal supports, financial situation, health insurance coverage, and potential risk factors to good health. Included in the Appendix to this Report is a summary of published findings which are based upon data from this study. Findings indicate that the percentage of respondents reporting limitations in critical areas was relatively small, but those individuals reporting limitations were at greatly increased risk of negative outcomes and/or increased utilization of health and social services.

Cohort Analysis of Disabled Elderly

Period: August 1988-November 1990.

Total Funding: \$89,986.

Awardee: Brandeis University Research Center, 415 South Street, Waltham, Massachusetts 02254.

Investigator: Korbin Liu, Sc.D.

Examining the impact of institutionalization and the medical expenses incurred prior to and after institutional placement on the spouse who is not institutionalized. This analysis will include the impact of one spouse's institutionalization on the other spouses's economic, residential, health, and functional status as well as the Medicaid spend-down process as experienced by the noninstitutionalized spouse.

Refining the calibration of the underwriting factors used in computing the adjusted average per capita cost for establishing the capitation rates for aged Medicare enrollees joining health maintenance organizations and other prepayment plans. This will include combining detailed data on the functional and socioeconomic characteristics of the aged population from the 1982 and 1984 National Long-Term Care Surveys with Medicare utilization and expenditure data.

Converting the data tape from the 1984 National Long-Term Care Survey to a format suitable for public distribution.

Estimating what the Medicare expenditures would have been in 1982 and 1984 had the provisions of the Medicare Catastrophic Coverage Act of 1988 (MCCA) been in effect. (This was added to the project's scope of work in January 1989.)

Public use data tapes from the 1982 and 1984 National Long-Term Care Surveys are available from the National Technical Information Service. There are three parts to the package, and each may be purchased separately:

The documentation for the data tapes is available in paper copy or microfiche. The accession number is PB88-172267.

The data from the 1982 and 1984 Surveys are available in two separate tapes. One contains data on persons interviewed in 1982 and 1984. This provides the longitudinal perspective on persons in the Surveys. The second contains data on all persons participating in the 1984 Survey. This includes data on aged persons who became Medicare beneficiaries after the 1982 Survey was conducted. This provides a cross-sectional perspective on functionally impaired aged Medicare beneficiaries in 1984. The 1984 data on persons in nursing homes are more complete than the data obtained in 1982. The accession number is PB88-172242.

Medicare Part A bill data for services received between 1978 and 1985 by persons participating in the Surveys constitute the third tape. The coding scheme permits person-level linkage of the bill file to persons participating in the Surveys. The accession number is PB88-172259.

Technical assistance to person's purchasing the public use tapes is available from the staff at Duke University. The provision of this service is funded under this agreement. A report has been submitted covering all the tasks described except for the modification added in January 1989: estimating what the impact of MCCA would have been on Medicare expenditures had the provisions been in effect in 1982 and 1984. The report, bearing the title of this project, is available from the National Information Service, accession number PB89-190342. Among the salient findings of this report were:

The number of elderly persons in the United States who might need long-term care services in the community or in institutions because of impairments in the activities of daily living is expected to increase from about 6.8 million in 1985 to 19.0 million in 2040.

Given optimistic assumptions about continuing decreases in the mortality rate, the number of elderly persons with functional impairments in the activities of daily living could be as great as 23.6 million by 2060.

These estimates could be significantly affected by prevention or improved treatment of disabling conditions, such as arthritis. A 50-percent reduction in the prevalence of arthritis would, by 2040, reduce the number of persons with arthritis 1.5 million below current projections.

The report points out that diseases for which we know the most about risk factors and control, such as heart diseases, stroke, and cancer, are lethal diseases that produce relatively little long-term disability. In contrast, the diseases that are not as well studied and for which we have fewer effective controls, such as dementia, osteoporosis, rheumatoid arthritis, and osteoarthritis, are chronic degenerative diseases that produce the most long-term disability. Thus, without considerable new research on these other disabling diseases, total life expectancy is likely to increase more rapidly than disability-free life expectancy. This will tend to increase the prevalence of disability and the need for long-term care services.

Research on Competitive Forces Driving Medicare Utilization

Period: September 1984–November 1988.

Total Funding: \$246,495.

Awardee: Laguna Research Associates, 455 Market Street, Suite 1190, San Francisco, CA 94105.

Investigator: Nelda McCall.

The major objective of this project is to analyze how various factors affect Medicare beneficiaries' utilization of and expenditures for services. These factors include: ownership of supplemental health insurance policies, beneficiaries' knowledge of the Medicare program and of the supplemental policies they own, and the extent to which beneficiaries are treated on assignment by physicians. Data sources include: a detailed 1982 survey of a random sample of Medicare beneficiaries in six States (California, Florida, Mississippi, New Jersey, Washington, and Wisconsin), copies of the insurance policies owned by beneficiaries in this sample, and complete Medicare utilization records for this sample from 1980 to 1982.

Two papers were produced. "The Effectiveness of Consumer Choice in the Medicare Supplemental Health Insurance Market" shows that ownership of supplemental insurance is strongly linked to higher levels of income and assets and knowledge of Medicare, and that ownership of effective policies (i.e., those that provide for real supplementation of Medicare through coverage of inpatient and outpatient care for all illnesses) is further related to these higher income and asset levels and to higher

educational levels. Ownership of more than one supplemental policy is more likely to occur among those who work or whose spouses work, those with property, and those who are more highly educated, although it is less likely to occur among urban beneficiaries and those who are married. Ownership of only less effective policies is more common among beneficiaries in the older age group and less common among those more highly educated. All races other than white are significantly less likely to own any kind of policy: one policy, two or more policies, effective policies, or less effective policies. The second paper, "The Effect of Private Insurance on Utilization: Evidence from the Medicare Population," indicates that the effect of supplemental insurance coverage on utilization of services is strongest for those in poor or fair perceived health. It is also strongest for the use of services, and less so for the level of use by service users. The effect is even more dramatic for those in poor or fair health having a policy with first-dollar coverage.

The final report, entitled "Competitive Forces Driving Medicare Utilization," accession number PB90-243841, is available from the National Technical Information Service.

Information for Prudent Insurance Choices

Period: November 1984-March 1988.

Total Funding: \$300,000.

Award: Cooperative Agreement.

Awardee: Western Consortium for the Health Professions, Inc., 703 Market Street, Suite 535, San Francisco, California 94103.

Investigator: Shoshanna Sofaer

This project developed a methodology for organizing and presenting data on illness costs and insurance benefits that are intended to increase the capacity of aged Medicare beneficiaries to make prudent choices in selecting supplemental health insurance coverage. The informational documents generated by this methodology permit comparisons of out-of-pocket costs and benefits of alternative plans. The comparisons are based on scenarios involving episodes of illness common to the aged. Workshops were presented to Medicare beneficiaries in the Los Angeles area that described charges associated with selected illness episodes for various health insurance options available in the study area. Two groups were given pre- and post-test measurements of their choices regarding health insurance options. In the workshops for the test group, information on out-of-pocket expenses associated with each illness episode was presented for each of the options available to them. In the workshops for the comparison groups, only general information on the insurance options was presented. The options presented included: medigap plans with a range of benefits, including skilled nursing facility care; closed and open panel health maintenance organizations (HMOs); an exclusive provider organization option providing benefits beyond those generally offered by health insurance plans (e.g., glasses, prescription drugs); and a disease-specific plan.

A final report was received in September 1989. The project findings indicate that aged Medicare beneficiaries have a poor understanding of their coverages under Medicare and Supplementary insurance policies and often pay for duplicative coverages. The presentations to the test and comparison groups moderately improved understanding of their insurance coverages. Followup mail surveys 3 and 9 months following the presentations showed that about 60 percent of the members in both groups made no change in their insurance coverages. There was some indication, though not statistically significant at the 95-percent confidence level, that the test group had a larger increase in HMO membership. Overall, it was found that the test group showed a greater decrease in premium payments and duplicative coverages. The final report entitled "The Illness Episode Approach: Informing Medicare Beneficiaries Insurance Decision" is available from the National Technical Information Service, accession number PB90-133679.

Long-Term Care of Aged Individuals With Hip Fractures: Public Versus Private Costs

Period: September 1983-September 1988.

Total Funding: \$711,793.

Awardee: University of Maryland Medical School, 655 West Baltimore Street, Baltimore, Maryland 21201.

Investigator: Jay Magaziner, Ph.D.

This study examined the complex economic and psychosocial determinants of the public and private contribution to the long-term care of a group of aged individuals who suddenly became disabled by hip fractures. The impact of family size and composition, social support, family economic resources, and the aged individuals' physical and mental health were analyzed in terms of the decisions to enter a nursing

home or return home. Study data came from 858 patients from seven hospitals in the Baltimore, Maryland area.

Some of the major study findings were as follows:

Use of nursing home care. Patients admitted to nursing homes following discharge from the hospital for a hip fracture tended to: come from households with a larger portion of members who were working, were male, and had claimed poor or fair health; be protestant, older, and white; come from higher income families; have poorer capacity to perform instrumental activities of daily living; live in residences that had stairs to climb; and receive less caretaking from family members and friends during the 2 months following hospital discharge for the fracture.

Use of paid home care aides. Patients who used the services of paid home care providers were more likely to: be better educated; have more disposable monthly incomes; live alone; and have many sisters and daughters who headed large households and who resided within 5 miles of the patients' residences. Prior to the fracture, patients receiving assistance from paid home aides tended to get support for a wide range of activities including emotional support, indoor and outdoor mobility, and arrangements for services and medical supervision. After the fracture, the range of supported activities narrowed. The activities receiving the greatest support were personal and domestic care needs and physical therapy.

Substitutability of nursing home care, caregiving, and paid home aides. Patients who relied more on caregiving and paid assistance tended to have substantially shorter nursing home stays. On average, during the 2 months following patients' discharges from the hospital, patients who received an additional 12 minutes per week of caregiving time or an additional 7 minutes per week of paid assistance spent 1 less day in a nursing home during the 2 months following discharge.

Financial support. Prior to the fracture, most patients received modest financial support from family and friends to help pay the cost of medical care services. This support dramatically increased during the 2 months following patients' discharges from the hospital. However, this support returned to pre-fracture levels within 6 months following hospital discharge. For example, families and friends contributed a modest 2 percent to the cost of paid home aides prior to the fracture. Actual dollar support increased dramatically by sixfold during the 2 months following patients' discharges from the hospital, then returned to pre-fracture levels after 6 months. After the fracture, family and friends contributed a modest 5 percent of the costs for nursing home care at 2 months and 2 percent after 6 months following patients' discharges from the hospital.

Long-Term Care Survey

Total Funding: \$150,000.

Agency: National Institute on Aging.

Investigator: Kenneth Manton, Ph.D.

The Office of the Assistant Secretary for Planning and Evaluation and the Health Care Financing Administration agreed to transfer funds to the National Institute on Aging (NIA) in support of an existing NIA grant to Duke University/Center for Demographic Studies. This grant is entitled Functional and Health Changes of the Elderly, 1982-1988 (Grant No. 1R37AG07198-01). The National Long Term Care Survey is a detailed household survey of persons aged 65 and over who have some chronic (90 days or more) functional impairment. It has been administered three times. The original survey, conducted in 1982, was devised as a cross-sectional survey. The 1984 survey, added a longitudinal component to the sample design. The survey was repeated in 1989 using the cohorts from the previous surveys in addition to persons becoming 65 to form a nationally representative sample of impaired elderly persons. To facilitate the use of this database, the following tasks related to the 1982/84 surveys will be carried out under this agreement:

- Derivation of new longitudinal sample weights;
- Improvement of coding by checking consistency of survey items;
- Improvement in survey documentation; and
- Seminars and education.

The project is in the early developmental stage.

Medicaid Tape-to-Tape: Research Data and Analysis

Period: March 1986-March 1991.

Total Funding: \$5,141,406.

Contractor: SysteMetrics, Inc., 104 West Anapamu Street, Santa Barbara, California 93101.

Investigator: Suzanne Dodds.

This project continues the development and implementation of a Medicaid person-level data set from the five State Medicaid Management Information Systems (MMIS) in California, Georgia, Michigan, New York, and Tennessee. This effort will acquire data on enrollment, claims, and providers for 1985-88. These data will be used to create uniform files, provide descriptive reports, support analysis and evaluation, and develop methodology for online data base management. This project will provide a continuum of 9 years of uniform Medicaid data for the conduct of analysis of program management, evaluation of policy alternatives, and feedback to States in the area of Medicaid financing.

Currently, project staff are acquiring and processing person-level enrollment, claims, and provider data that have been obtained from state MMIS. Project staff are also linking the data base to other kinds of health statistics to expand the uses of the data. The project will continue to produce early return tabulations that summarize enrollment, utilization, and expenditures data for each year and each participating State. Research is under way on a series of special topics including: capitation in Medicaid, mental illness, inpatient hospital use by Medicaid children, hospital reimbursement, Medicaid drug utilization, services to pregnant women and infants, physician volume, acquired immunodeficiency syndrome, long-term care, and Medicaid providers. The following reports have been published:

Andrews, R.M., Keyes, M.A., and Pine, P.L.: Acquired Immunodeficiency Syndrome in California's Medicaid Program, 1981-84, *Health Care Financing Review*. Vol. 10, No. 1., HCFA Pub. No. 03274. Health Care Financing Administration, Office of Research and Demonstrations. Washington. U.S. Government Printing Office, Fall 1988.

Adams, E.K., Ellwood, M.R., and Pine, P.L.: Utilization and Expenditures under Medicaid for Supplemental Security Income Disabled. *Health Care Financing Review*. Vol. 11, No. 1., HCFA Pub. No. 03286. Health Care Financing Administration, Office of Research and Demonstrations. Washington, U.S. Government Printing Office, Fall 1989.

Howell, E.M., and Grown, G.A.: Prenatal, Delivery, and Infant Care under Medicaid in Three States. *Health Care Financing Review*. Vol. 10, No. 4., HCFA Pub. No. 03284. Health Care Financing Administration, Office of Research and Demonstrations. Washington, U.S. Government Printing Office, Summer 1989.

Burwell Brian, Adams, E.K., Mieners, M.: Spend-down to Medicaid Eligibility Among Nursing Home Recipients in Michigan. *Medical Care*, Vol. 28, No. 4, April, 1990.

Ray, Wayne, Griffin M. Gaugh D.: Mortality Following Hip Fracture Before and After Implementation of the Prospective Payment System. *Archives of Internal Medicine*, Vol. 150, No. 10, 2109-2114.

Report to Congress: High Volume and High Payment Procedures in the Medicaid Population. USDHHS, Health Care Financing Administration, HCFA Pub. No. 03289, September, 1989.

Long-Term Care Studies

Period: September 1989-September 1994.

Total Funding: \$3,790,234.

Contractor: Health and Sciences Research Incorporated, 9300 Lee Highway, Fairfax, Virginia 22031.

Investigator: David Kennell, Ph.D.

The purpose of this project is to conduct research related to HCFA's Medicare and Medicaid programs in the area of long-term care policy development. The project will focus primarily on four major areas:

The financial characteristics of Medicare beneficiaries who receive or need long-term care services.

How the characteristics of Medicare beneficiaries affect their utilization of institutional and noninstitutional long-term care services.

How relatives of Medicare beneficiaries are affected financially and in other ways when beneficiaries require or receive long-term care services.

How the provision of long-term care services may reduce expenditures for acute care health services.

Analyses will use existing long-term care and other survey data bases, such as the National Long-Term Care Surveys, the Longitudinal Study of Aging, the National Nursing Home Survey, the Survey of Income and Program Participation, and the National Medical Care Expenditure Survey. Medicare administrative records and other extant information will also be utilized. A number of focused analytic studies, policy reports, syntheses, and special studies are required under the contract.

The analytic plan for this project has been completed and a number of studies have been initiated.

An Analysis of the Impact of Prescription Drug Coverage for Aged Medicare Beneficiaries

Period: August 1989–August 1992.

Total Funding: \$889,741.

Awardee: Gerontology Center, College of Health and Human Development, the Pennsylvania State University, 210 Henderson Building South, University Park, Pennsylvania 16802.

Investigator: Bruce Stuart, Ph.D.

The purpose of the cooperative agreement is to conduct four coordinated studies of prescription drug use among the elderly, using the data base from the Pennsylvania Department on Aging's Pharmaceutical Assistance Contract for the Elderly (PACE) data base, linked with Medicare Part A and B claims data and eligibility and death information. The studies include: longitudinal analysis of PACE cohorts, demand characteristics of established insureds prescription drug use in the last year of life, and drug-risk analysis.

All of the analyses are underway; linkage with the Medicare Part A and B data is in progress.

Medicare Catastrophic Coverage Act Evaluation: Beneficiary and Program Impacts

Period: September 1989–August 1994.

Total Funding: \$2,187,621.

Contractor: Abt Associates, Inc., 55 Wheeler Street, Cambridge, Massachusetts 02138.

Investigator: David Kidder, Ph.D.

The purposes of the contract is to perform a series of research projects, all related to the analysis of the benefit changes introduced by the Medicaid Catastrophic Coverage Act (MCCA) of 1988 (P.L. 100-360). The categories of impacts include: the effects of the Medicare Part A changes instituted during 1989 and then revoked by Congress, effective 1990, and the effects of the Medicaid expansions, which were not revoked, on pregnant women and children, on dually entitled aged persons and on community based spouses of institutionalized Medicaid recipients.

Work on the contract was suspended until November 1990 pending the revision of the contract commensurate with the rescission of the Medicare aspects of the MCCA benefit by Congress.

Medicare Catastrophic Coverage Act Evaluation: Impacts on Industry

Period: September 1989–August 1994.

Total Funding: \$993,199.

Award: Contract.

Contractor: The Urban Institute, Health Policy Center, 2100 M Street, NW., Washington, D.C. 20037.

Investigator: John Holahan, Ph.D.

The purpose of the contract is to perform a series of research projects, all related to the analysis of the benefit changes introduced by the Medicare Catastrophic Coverage Act of 1988 (P.L. 100-360). The categories of impact include hospitals, nursing homes and home health agencies.

Work is ongoing regarding the nursing home impacts; work on the hospital and home health analyses will commence by the end of 1990.

Determinants of Home Care Costs

Period: August 1990–July 1991.

Total Funding: \$125,140.

Awardee: Brandeis University Research Center, 415 South Street, Waltham, Massachusetts 02254.

Investigator: Korbin Liu, Ph.D.

The major aim of this project is to develop a better understanding of the relationship between economic and program status and formal home care use and costs. The relationship between health status (functional, cognitive, and medical) and use and costs of formal home care will be examined. If the data permit, the analysis will be expanded to include informal home care. If this is possible, the mix of formal and informal care received by individuals can be explored. Data from the Connecticut Community Care, Inc. will be used.

This project is in the early development stage.

Medicaid Home and Community-Based Waiver Programs for Acquired Immunodeficiency Syndrome Patients

Period: August 1988-July 1990.

Total Funding: \$52,679.

Awardee: The RAND Policy Research Center, 1700 Main Street, Santa Monica, California 90406.

Investigator: Peter Jacobson, Ph.D.

The purpose of this project is to develop a background paper that identifies major research questions for an evaluation of the utilization and expenditure patterns of acquired immunodeficiency syndrome (AIDS) patients in State Medicaid home and community-based waiver programs. The study will identify appropriate data sources, review available literature on State waiver programs, and identify major research questions that should be addressed. The project team will explore the reasons States with large AIDS patient populations have not sought Medicaid home and community-based waivers.

The project team reviewed current Medicaid AIDS waivers in the State of California, Hawaii, New Jersey, New Mexico, Ohio, and South Carolina. Contacts were made with other States considering using the waiver program. A RAND report entitled "AIDS Specific Home and Community-Based Waivers for the Medicaid Population" was published in December 1989. (R-3844-HCFA). An article analyzing Medicaid home and community-based waivers for AIDS patients is being prepared for the 1990 Annual Supplement of the *Health Care Financing Review*.

High-Cost Hospice Care

Total Funding: \$42,521.

Awardee: Project Hope Research Center, Two Wisconsin Circle, Suite 500, Chevy Chase, Maryland 20815.

Investigator: Burton Dunlop, Ph.D.

The purpose of this project is to: (1) identify what Medicare hospice services are high-cost, (2) determine or estimate the average cost of these services, and (3) ascertain from a panel of clinical experts dimensions of use of high-cost procedures. Dimensions of use include measures such as number of patients receiving these services, frequency and duration of use of these services, the diagnoses involved, and trends in the use of these procedures for palliation versus curative care. Although the particular focus will be on techniques used in hospice care, the project will compare these with the pattern of palliative care occurring in nonhospice care settings as well as the use of these same techniques for curative care.

This project is in the early developmental stage.

Community Care for Alzheimer's and Related Diseases

Period: June 1987-December 1989.

Total Funding: \$127,970.

Grantee: The Urban Institute, Health Policy Center, 2100 M Street, NW., Washington, D.C. 20037.

Investigator: Korbin Liu, Sc.D.

The Urban Institute will analyze data from the National Long-Term Care Channeling Demonstration (1982-84) to determine the range of services, sources, and costs of care used by community residents with cognitive impairment and to determine the risks of their entering nursing homes, as a function of physical and mental health status, and the types and amounts of care received in the community. The study is expected to determine the utility of the Channeling and other available databases in identifying and determining the service utilization of community residents with cognitive disease. It also will provide baseline information for the Medicare Alzheimer's Disease Demonstration.

Four draft reports have been received relating to the identification and service utilization of persons with cognitive diseases. A final report incorporating these drafts is expected in late 1990. In addition, the Health Care Financing Administration has approved an additional task that involved an assessment of the feasibility of using a longitudinal data base from the Triage/Connecticut Community Care, Inc. This data base contains details on patient assessment and management systems that may provide additional information on the costs of persons with Alzheimer's and related diseases.

As a result, an award was made through the Brandeis Policy Center cooperative agreement to conduct further studies with this database.

Feasibility Analysis for Pathways to Long-Term Care Project

Period: August 1989-November 1989.

Total Funding: \$19,994.

Awardee: Brandeis University Research Center, 415 South Street, Waltham, Massachusetts 02254

Investigator: Walter Leutz, Ph.D.

This study will determine the feasibility of analyzing social health maintenance organization data on service use that tracks individuals as they make a transition from a state of health to one of severe impairment. If a sufficient amount of data are available, subsequent analysis may be approved with additional funds to determine whether definable pathways could be derived. These pathways to long-term care could assist in case management practice and provide outcome-related information regarding the use of long-term care services in managed-care setting.

The feasibility study was completed and available data did not appear sufficient to support additional analysis.

Long-Term Care Supply and Medicare Hospital Utilization

Period: August 1989–August 1990.

Total Funding: \$47,986.

Awardee: Abt Associates, Inc., 55 Wheeler Street, Cambridge, Massachusetts 02138.

Investigator: Robert Schmitz, Ph.D.

The purpose of this project is to investigate how local variations in the availability of nursing home beds affect Medicare rates of hospitalization. Effects on the number of admissions, the number of hospital readmissions, the number of hospital days used, and the cost per Medicare Part A enrollee are to be evaluated. Urban and rural differences will be assessed. The impact of community long-term care services, Medicare risk-contract health maintenance organization services, and the prospective payment system on Medicare Part A utilization are to be evaluated.

Analyses have been completed and a final report is being prepared.

Impacts of Long-Term Care Supply Differences on Medicare Service Use

Period: August 1990–February 1991.

Total Funding: \$80,204.

Awardee: Brandeis University Research Center, 415 South Street, Waltham, Massachusetts 02254.

Investigator: Christine Bishop, Ph.D.

This study will identify and assess methodological and practical problems associated with a potential investigation of access to long term care service, and the resulting impact on beneficiary use of Medicare-covered services. These services include hospital care, Medicare-covered home health care, and Medicare-covered skilled nursing facility care. The project will directly address issues, which have been studied in various models, of the effects of long-term care access/supply on utilization of health services. The project will also develop a suggested study design on this topic.

This project is in the early developmental stage. It is anticipated that findings will be incorporated in a draft final report which is due by the end of December 1990. The final report is expected by the end of February 1991.

Efficacy of Nursing Home Preadmission Screening

Period: June 1988–December 1990.

Total Funding: \$376,698.

Awardee: Brown University, Division of Biology and Medicine, Providence, Rhode Island 02912.

Investigator: Mary E. Jackson, Ph.D.

In recent years, more than 30 states have adopted some form of preadmission screening, although the scope and methodology of programs vary considerably. The purpose of this project is to evaluate a nursing home preadmission screening methodology developed by Brown University for the State of Connecticut. This screen is designed to identify those persons who would be institutionalized if community-based services (under the State's Section 2176 Medicaid waiver program) were not available. The project will analyze the extent to which the screen accurately predicts the need for a nursing home level of care or an equivalent level of community care. It is anticipated that this study will refine Connecticut's screening instrument, thereby helping to determine the most cost-effective long-term care placement for each client. The study also will investigate the predictive validity of several other States' preadmission screening methodologies. A summary of findings, along with a synthesis of other States' efforts, will determine whether preadmission screening programs can successfully identify at-risk individuals and should provide guidance to the Health Care Financing Administration in identifying the most effective approaches.

The cooperative agreement was awarded in July 1988. A project start date of September 1, 1988, was approved to provide the awardee with adequate time to hire appropriate staff. The predictive validity of Connecticut's preadmission screen (Pennsylvania) decision rules has been preliminarily assessed by applying them to each of three data sets, as well (a synthetic data set); these data sets include the South Carolina Community Long-Term Care Demonstration, the Georgia Alternative Health Services Project, and the National Long-Term Care Channeling Demonstration. During the second year of the project, screening and assessment outcome data for a 6-month cohort of Connecticut Community-Based Services program applicants was reviewed.

Analyses of these data will have a significant impact on the planned revision of Connecticut's screen. A final project report is expected in December 1990.

Urban/Rural Variation in Home Health Agency and Nursing Home Services

Period: September 1989–November 1990.

Total Funding: \$155,096.

Awardee: Brandeis University Research Center, 415 South Street, Waltham, Massachusetts 02254.

Investigator: Christine Bishop, Ph.D.

Brandeis University and the Urban Institute will compare urban and rural home health services and nursing home services to determine variation between provider characteristics and service utilization patterns. The underlying cost structures of urban and rural home health agencies will be studied as well. This study is national in scope and utilizes several Medicare databases for analysis.

This project is near completion; final reports will be submitted in late November, 1990.

Analysis of Cost, Patient Characteristics, Access, and Service Use in Urban/Rural Home Health Agencies

Period: September 1989–November 1990.

Total Funding: \$103,420.

Awardee: University of Minnesota Research Center, 1919 University Avenue, St. Paul, Minnesota 55104.

Investigator: John Nyman, Ph.D.

The purpose of this project is to study urban and rural differences in home health agency costs, patient characteristics, access to care, and service utilization patterns. The study will include two types of analyses:

Costs, patient characteristics, and service utilization patterns will be analyzed using home health care data from State of Wisconsin.

Access to home health care services will be examined with the use of patient-level Medicare data. Mathematica Policy Research, Inc., as subcontractor for the project, will apply two of the Aftercare Guidelines to the Medicare plan of treatment data to develop a measure of access between urban and rural recipients of home health care.

This project is near completion; final reports will be submitted in late November, 1990.

Study of Alternative Out-of-Home Services for Respite Care

Period: September 1988–February 1990.

Total Funding: \$239,495.

Awardee: Brandeis University Research Center, 415 South Street, Waltham, Massachusetts 02254.

Investigator: Christine Bishop, Ph.D.

This study will examine the advisability of expanding the respite care benefit to cover out-of-home services such as those provided in a nursing home or an adult day care center as an alternative to in-home respite care. Brandeis University researches will assess the advisability of broadening the respite care benefit to include alternative services, giving consideration to cost, access, quality care, and the feasibility of implementation. This will be accomplished using information collected from existing data sets and from ongoing respite programs and demonstrations.

The final report has been received. The recommendation made, based on this report, is to evaluate the experience of offering the respite benefit as an in-home-only benefit, as currently legislated, before expanding to out-of-home services.

Evaluation of Life-Continuum of Care Residential Centers in the United States

Period: January 1985–September 1989.

Total Funding: \$832,871.

Awardee: Hebrew Rehabilitation Center for the Aged, 1200 Centre Street, Boston, Massachusetts 02131.

Investigator: Sylvia Sherwood, Ph.D.

The objective of this project is to obtain information about the characteristics of continuum of care residential center (CCRC) facilities and their residents and compare them with elderly residents living in the community, with respect to quality of life and health, service costs, and utilization. Data will be gathered from 20 CCRCs in four areas: Arizona, California, Florida, and Pennsylvania. These sites will be stratified according to the type of contract offered (extended versus limited), the age of the facility, and the income level of those enrolled. Three types of CCRC residents will be selected from the sites for the study sample: new admission (580), existing residents, both short- and long-stay residents (1,640), and residents who died just prior to or during the field data gathering period (660). Quality of life and service utilization data will be gathered at two points in time, at baseline and 12 months later. Three types of comparison samples will be employed:

A representative sample of elderly in their own homes or independent apartments (2,422).

A national sample of elderly living in congregate housing settings (2,350).

A representative sample of elderly who have died and for whom retrospective data are available for their last year of life (1,500).

The final report is expected by mid-1991.

Study of Adult Daycare Services

Period: June 1989–January 1990.

Total Funding: \$93,750.

Contractor: Institute for Health and Aging, University of California, San Francisco, 3733 California St., San Francisco, California 94143.

Investigator: Rick Zawadzki, Ph.D.

This survey of adult day centers will provide updated information on:

Who is served by adult day centers?

How many centers are there and where are they located?

What services do they provide?

What are the characteristics of operating these centers?

Who now funds these centers?

What is the cost of operating these centers?

Are there licensing, certification, and quality assurance standards governing these centers?

How do these characteristics vary by State?

Funding for the survey was obtained from the American Association for Retired Persons. All the known and designated adult day centers in the United States (over 2,100) were mailed a survey during February 1989. Responses were received from 1425 centers in 49 States providing information on organizational structure, licensing and certification, client characteristics, operating time and attendance, services provided, staffing, program costs, and revenue. A contract was awarded to the University of California at San Francisco to perform the analyses of the survey data.

The study found most centers are nonprofit organizations. Their service package available in adult day centers vary, but most centers include recreational therapy, meals and transportation, social work, nursing, personal care, and medical assessment. Clients are predominantly older persons who are physically and/or cognitively impaired. The average program enrollment was 37 and daily attendance was less than 20. The daily operation costs in 1989 was \$36, and over half of the centers operated at a deficit. Medicaid was the largest funding source of adult day care. A draft final report on the analysis has been received and final revisions are being made. It is expected that the report will be available by the end of 1990.

Activities of Daily Living Measurements as Determinants of Eligibility

Period: August 1989–October 1990.

Total Funding: \$99,991.

Awardee: Brandeis University Research Center, 415 South Street, Waltham, Massachusetts 02254.

Investigator: John Capitan, Ph.D. and Korbin Liu, Sc.D.

The study will use data from the National Long-Term Care Survey, National Long-Term Care Channeling Demonstration, and the Social Health Maintenance Organization Demonstrations comprehensive assessment form to examine issues associated with defining and measuring activities of daily living (ADLs) for use as eligibility criteria for Medicare services. A cost analysis will be performed and other issues associated with using ADL sources as eligibility criteria will be discussed.

Among the questions to be addressed are:

What level of ADL impairments is used to trigger eligibility?

Which ADL items should be used?

Under what circumstances should assessments be performed, and by whom?

Two draft reports have been received. The first report, "The Administration of Eligibility for Community Long Term Care," considers issues and makes recommendations on (1) eligibility criteria; (2) timing and setting of assessments; (3) assessment items; (4) assessor qualifications and training; and (5) review and appeal procedures.

The second report, "Home Care for the Disabled Elderly: Predictors and Expected Costs," uses a Tobit estimation procedure on data from the 1982 National Long Term Care Survey. Major predictors of the number of paid in-home visits per week include: age, sex, living arrangement, number of informal helpers, income and functional status. Cognitive impairment was not found to be a significant predictor. The parameter estimates then were used to simulate (1) the cost of providing home care services to select populations based on various combinations of program eligibility standards; and (2) the costs of some anticipated behavioral responses to the institution of a home care program.

Implementing Federal Regulations in Nursing Homes: A Conceptual Paper

Period: April 1990–September 1991.

Total Funding: \$52,630.

Awardee: University of Minnesota Research Center, 1919 University Avenue, St. Paul Minnesota 55104.

Investigator: Judy Gerrard.

The purpose of this project is to develop a conceptual paper on the issues involved in regulation of use of psychoactive drugs in nursing homes, the range of problems that the long-term care community and Health Care Financing Administration (HCFA) surveyors might face in implementing these regulations, the quality of large-scale data bases available for examining these issues and problems, and the research designs that would be most appropriate for studying the impact of the HCFA guidelines on use of psychoactive drugs by nursing home elderly. Two expert panels will be used in this project: a Practitioner Advisory Panel consisting of five local practitioners in the long term care community and a National Expert Panel of experienced researchers in psychoactive drug use by nursing home elderly.

This project is in the early developmental stage.

Goals and Strategies for Financing Long-Term Care

Period: August 1989–October 1990.

Total Funding: \$95,409.

Awardee: University of Minnesota Research Center, 1919 University Avenue, St. Paul, Minnesota 55104.

Investigator: Mark Pauly, Ph.D.

The purpose of this project is to use concepts drawn from a number of disciplines—economics, decision sciences, policy analysis, sociology, and demography—to develop statements of possible objectives for long-term care insurance. Defining objectives will include an analysis of benefits and costs from potential changes in financing and an analysis of expected behavioral changes in response to changes in financing. The meaning of these objectives will then be illustrated by applying them to several types of policy proposals:

Subsidization of private insurance.

Employer-provided insurance.

Whole-life versions of insurance.

Means-tested public insurance.

Medicaid-equivalent subsidies.

Catastrophic public insurance.

Public provision of information on Medicare coverage and the need for insurance.

Analyses have been completed and a Final Report is being prepared.

Natural History of Post-Acute Care for Medicare Patients

Period: December 1986–September 1991.

Total Funding: \$3,702,330.

Awardee: University of Minnesota School of Public Health, 714 Washington Avenue, St. Paul, Minnesota 55414.

Investigator: Robert Kane, Ph.D.

This is a study of the course and outcomes of post-acute care. It has two major components: analysis of Medicare data to assess differences in patterns of care across the country and to determine the extent of substitution where various forms

of post-acute care services are more or less available, and detailed examination of clinical cases from the most common diagnostic-related groupings receiving post-acute care in a few selected locations. Measures of the complexity of the clinical cases will be developed using a modification of the medical illness severity grouping system. This project is jointly funded with the Office of the Assistant Secretary for Planning and Evaluation.

This project is currently in the analysis stage.

Policy Study of the Cost Effectiveness of Institutional Subacute Care Alternatives and Services: 1984-92

Period: May 1990-April 1994.

Total Funding: \$1,370,000.

Grant: University of Colorado Health Sciences Center, 4200 East 9th Avenue, Box C-241, Denver, Colorado 80262.

Investigator: Andrew Kramer, M.D.

The University of Colorado will assess which subacute institutional settings and combinations of services are most cost-effective and provide more positive outcomes for various types of patients. The project will identify potential Health Care Financing Administration policy changes that might encourage use of the most appropriate settings and services. This 4-year project will use primary and secondary data from three previous HCFA-sponsored studies to compare quality, cost effectiveness, case mix, service mix, and utilization among institutional subacute care alternatives (skilled nursing facilities, swing bed hospitals, and rehabilitation hospitals) within and between two time periods: 1984-1987 and 1990-1992. This methodology is designed to determine the most cost effective combinations of services and provider settings for different types of patients requiring sub-acute care: for stroke, hip fracture, ventilator dependent, and congestive heart failure conditions.

This project is in the design stage. Preparation for sample selection is underway.

Bundling of Acute and Post-Acute Care Service

Period: September 1990-February 1991.

Total Funding: \$49,505.

Awardee: University of Minnesota Research Center, 1919 University Avenue, St. Paul, Minnesota 55104.

Investigator: Robert Kane, Ph.D.

This project will examine the concept of bundling payment for acute and post-acute care services into payment for an "episode of care." HCFA is interested in developing alternative approaches that would encourage organizations to manage an entire episode of care under a payment arrangement other than the present fee-for-service system. For this project, the University of Minnesota will prepare a report on the feasibility of different design options. After this report is completed, a technical advisory panel will be convened to review it. The draft report and panel comments and recommendations will then be synthesized into a final report.

The final report is expected in February 1991.

Prospective Payment System and Post-Hospital Care: Use, Cost, and Market Changes

Period: September 1985-January 1990.

Total Funding: \$706,118.

Awardee: Georgetown University, Center for Health Policy Studies, 2233 Wisconsin Avenue, NW., Washington, DC 20007.

Investigator: Judith Feder, Ph.D. and William Scanlon, Ph.D.

The purpose of the project is to determine how much the hospital prospective payment system (PPS) shifts care from the hospital to skilled nursing facilities (SNFs) and home health providers and to analyze the impact of this shift on total costs to Medicare and on changes in SNF characteristics that are likely to cause an increase in use by Medicare beneficiaries in the future. Medicare claims will be analyzed to determine how PPS has affected total service use (hospital, SNF, and home health) and costs for hospital patients. In addition, SNFs will be surveyed to identify changes in nursing home patients, services, and market structure likely to affect Medicare use. The survey will be supplemented with data from the Medicare/Medicare Automated Certification System (MMACS), SNF cost reports, and other sources.

Major project activities include:

Completion of nursing home survey.

Analysis of survey and MMACS data.

Completion of 1982 and 1985 Medicare claims processing for pre- and post-PPS analysis.

Completion of a three-stage sampling process of study hospitals.

The final report is expected by the end of 1990.

Changes in the Post-Hospital Care Utilization Among Medicare Patients

Period: August 1989-July 1991

Total Funding: \$102,247

Awardee: The RAND Policy Research Center, 1700 Main Street, Santa Monica, California 90406.

Investigator: Richard Neu, Ph.D.

In this project, a data file was created linking Medicaid billing records for inpatient hospital and post-hospital care for 1987 and 1988. RAND is using this file to document changes in post-hospital utilization among Medicare patients. The analyses will include an examination of skilled nursing facility, home health agency, and rehabilitative hospital care.

This study is in the analysis stage. A report of the findings is expected in the Summer of 1991.

Impact of the Prospective Payment System on the Quality of Long-Term Care in Nursing Homes and Home Health Agencies

Period: August 1986-November 1989.

Awardee: Center for Health Policy Research, 1355 South Carolina Boulevard, Denver, Colorado 80222.

Total Funding: \$608,553 Phase I, \$234,542 Phase II.

Investigator: Peter Shaughnessy, Ph.D.

Phase I of this study examined patient-level process indicators of quality of care provided to skilled nursing facility (SNF) and home health patients before and after implementation of the Medicare inpatient hospital prospective payment system (PPS). It also assessed pre- and post-PPS differences in patient care practices and outcomes as reported by physicians and nurses, and the number and types of acute care beds recently converted to SNF beds (transition beds). This study was expanded in September 1988 (Phase II) to conduct research mandated by the Medicare Catastrophic Coverage Act of 1988 relating to the quality of long-term care services (in community-based and custodial settings), and the effects of the provision of long-term care services on the reduction of expenditures for acute health care services. Phase II includes the development of recommendations for additional research in these areas.

Findings from Phase I were incorporated into a July 1987 report entitled, *Findings on Case Mix and Quality of Care in Nursing Homes and Home Health Agencies*. This report is available from the National Technical Information Service, accession number PB88-100623. Analyses of the pre- and post-PPS time periods indicated that the level of quality of care provided prior to the implementation of PPS has generally been maintained. Under Phase II, three reports have been prepared: (1) "Future Research on the Quality of Long-Term Care Services in Community-Based and Custodial Settings; (2) State Survey of Community-Based Care Systems; and (3) "Future Research on the Relationship Between Long-Term Care Services and Reduced Acute Care Expenditures." These reports are expected to be available from the National Technical Information Service by December 1990.

Study of Home Health Care Quality and Cost Under Capitated and Fee-For-Service Payment Systems

Period: June 1987-June 1992.

Total Funding: \$1,683,773.

Awardee: Center for Health Policy Research, 1355 S. Colorado Boulevard, Denver, Colorado 80222.

Investigator: Peter Shaughnessy, Ph.D.

This project is designed to evaluate service utilization, quality, and cost of Medicare home health care provided under capitated and noncapitated (fee-for-service) payment systems. Patient-level, case-mix, and service use data will be collected on a sample of approximately 4000, patients from 44 agencies nationwide. A random as well as a stratified patient sample will be drawn from both fee-for-service and capitated payment environments to assess and compare cost effectiveness of care, quality of care, and incentives to admit and provide care in the two payment environments. Secondary data analysis will also be completed on a sample of 10,000 Medicare beneficiaries using Medicare claims data to compare service use patterns among posthospital Medicare patients discharged to (1) skilled nursing facilities, (2) home health care, and (3) the community, as well as (4) Medicare home health patients admitted from the community.

Recruitment and training of home health agencies and primary data collections are underway. Secondary data is being analyzed. Several interim reports of the results of various preliminary analyses will be prepared during 1991.

Home Care Quality Studies

Period: October 1989-March 1993.

Total Funding: \$2,642,445.

Contractor: University of Minnesota, School of Public Health, Box 197, 420 Delaware St., SE., Minneapolis, Minnesota 55455.

Investigator: Robert Kane, Ph.D.

This study will carry out research on the following topics:

The quality of long-term care services in community-based and custodial settings.

The effectiveness of (and need for) State and Federal consumer protections that assure adequate access to and protect the rights of Medicare beneficiaries who are provided long-term care services (other than in a nursing facility).

The project will focus on in-home care, examining traditional home health services that are reimbursed by Medicare and Medicaid, as well as personal care and supportive services which have more recently been covered by Federal and State sources of funding. Key project tasks include:

Development of a taxonomy clarifying the various objectives/goals ascribed to home and community-based care, from the various perspectives of consumers, payers, and care providers.

Development and feasibility-testing of a survey design which would measure the extent of, need for, and adequacy of, home care services for the elderly.

A study of variations in labor supply and related effect(s) on home care quality, as well as factors that contribute to these variations.

Recommendations to improve the quality of home and community-based services by identifying best practices and promising quality assurance approaches.

Work is proceeding on each of these identified primary tasks. The final progress report for this contract is expected in March 1993.

Development of Outcome-Based Quality Measures for Home Health Services

Period: September 1988-December 1992.

Total Funding: \$1,965,389.

Contractor: Center for Health Policy Research, 1355 S. Colorado Boulevard, Denver, Colorado 80222.

Investigator: Peter Shaughnessy, Ph.D.

The purpose of this contract is to develop and test outcome-based measures or indicators of quality for Medicare home health services. The measures are to be reliable and valid for use in monitoring and comparing quality of home health care across agencies, recognizing possible confounding factors such as case mix. Colorado has developed a set of quality indicator groups that they hope to test in this study. The contractor will consider a broad range of possible outcome measures including health and functional status measures. They will test outcome measures that are linked to specific diagnostic conditions and/or services and broad-based measures that are not so linked. They will also test measures that are more precise in the information provided and others that are more practical and less costly to administer. The key criteria for the selection of measures include feasibility, reliability, validity, difficulty in gaming the measures, impact on quality, access, and cost/burden of data collection to the Health Care Financing Administration and home health agencies.

The contract was awarded in September 1988. The contractor has completed literature reviews, a concept paper, a design report, and an Office of Management and Budget Reports Clearance package. Data collection began in early 1990. The Robert Wood Johnson Foundation (RWJF) has awarded a grant to the Center for Health Policy Research that complements this contract. The RWJF grant focuses on adult non-Medicare home care services and populations and uses clinical panels to identify quality measures.

Develop and Demonstrate a Method for Classifying Home Health Patients to Predict Resource Requirements and to Measure Outcomes

Period: June 1987-December 1990.

Total Funding: \$968,332.

Awardee: Georgetown University, Georgetown School of Nursing, 3700 Reservoir Road, NW., Washington, D.C. 20007.

Investigator: Virginia Saba, RN, Ed.D.

The purpose of the project is to develop a method for classifying patients that will predict resource requirements and measure outcomes of Medicare patients in certified home health agencies (HHAs). Data on 73 dependent variables was collected from the home health records of approximately 9,000 recently discharged Medicare

patients drawn from a national sample of approximately 650 certified HHAs, stratified by size, ownership, and geographic location. The data will be analyzed, using multivariate statistical techniques to determine which variables are most predictive of resource requirements. The identified relevant variables will then be incorporated into a classification method with assessment tool that categorizes patients according to predicted resource requirements. A data base of participating HHA and the characteristics of their Medicare patients will also be produced.

The final report is expected by early 1991.

Psychoactive Drug Use Among Nursing Home Elderly

Period: September 1989–May 1990.

Total Funding: \$97,600.

Awardee: University of Minnesota Research Center, 1919 University Avenue, St. Paul, Minnesota 55104.

Investigator: Judy Gerrard.

This study will examine the extent of regular and prn, or as needed, psychoactive drug use among nursing home elderly and the possibility of appropriate and inappropriate use of such drugs in terms of characteristics of nursing home residents and nursing homes. Researchers will use existing, secondary-source data from two previous research studies for the analyses. The studies involve a retrospective review of records of 8,000 randomly selected individuals residing in nursing homes from 1980 to 1987.

The results of the study included:

Although the level of use for each class of drug tested was the same among residents cohort and the new admissions cohort different people comprised the user groups.

There was a considerable change in the number of new admissions and residents who were either discontinued or initiated on the drugs following entrance to nursing homes.

Applying the criteria based on the Guidelines for Antipsychotic Drugs and for Unnecessary Drugs, it was found that half of the neuroleptic users in both admissions and residents cohorts lacked a specific condition or diagnosis that would make such use eligible under these guidelines. Seventy-five percent of the antidepressant users had no documented diagnosis of depression.

The report is being prepared for submission to NTIS.

The Use of Medicaid Reimbursement Data in the Nursing Home Quality Assurance Process

Period: June 1988–August 1991.

Total Funding: \$132,930.

Awardee: Center for Health Systems Research and Analysis, University of Wisconsin-Madison, Room 300 Infirmary, 1300 University Avenue, Madison, Wisconsin 53706.

Investigator: David Zimmerman, Ph.D.

The purpose of this project is to assess the feasibility of using Medicaid reimbursement data to target facilities and residents in the nursing home quality assurance survey process. Medicaid reimbursement data appear to hold considerable promise in helping target facilities for more intensive review, identifying specific areas of deficient care, and identifying individual residents for more detailed review. Information on medication use, sentinel health events, and other indicators can be provided to surveyors in preparation for the field survey. The information can also be used to determine whether problems have recurred after the survey and followup visits. The objectives of the project are:

To convert reimbursement data into specific quality of care indicators (QCI), particularly with respect to drug-related measures and medical outcomes.

To identify the conditions, standards, and elements in the Federal regulation for which the use of QCIs has the greatest potential benefit.

To develop and demonstrate in one State (Wisconsin) the procedures for providing QCIs to survey staffs.

To assess the potential for implementing the system in other States.

To determine the implications of the proposed Health Care Financing Administration nursing home regulations and 1987 Omnibus Budget Reconciliation Act provisions for the use of reimbursement data in the quality assurance process.

To design an expanded demonstration of the use of QCIs in the survey process.

Fifteen preliminary QCIs have been developed and are currently being reviewed by the project staff and the advisory panel. The QCIs have been linked to specific

conditions, standards, and elements within the existing Federal regulations, and proposed new regulations are being reviewed to determine their relationship with the QCI. Deficiencies and QCIs in Wisconsin for the period August 1987 to 1988 are being analyzed to determine the baseline relationship between the two measures. Preliminary discussions have been held with survey staff to develop the system for conveying QCI information to the surveyors in a systematic way. Finally, a survey of State Medicaid reimbursement and quality assurance officials is being designed to identify which State may hold the greatest potential for the use of Medicaid data in the survey process.

Utility of Medicaid Claims Data for Deriving Nursing Home Quality Indicators

Total Funding: \$302,311.

Awardee: SysMetrics, Inc., 104 West Anapama Street, Santa Barbara, California 93101.

Investigator: David Klingman.

The goal of this project is to investigate the usefulness of claims data from Medicaid and Medicare Administrative record systems as sources of nursing home patient treatment and outcome measures. The study will involve retrospective analysis of 1987 Medicaid and Medicare claims data and facility deficiency data from four States: California, Georgia, Michigan, and Tennessee. Currently, the only nationwide assessment of the quality of nursing homes consist of summaries of survey deficiencies. While quite valuable, previous research has indicated that the deficiency data should be used with caution since the levels and types of citations are highly variable both across and within States. The innovative element of this study is the identification, using routinely collected claims data, of sentinel health events that are diagnosis codes for which hospitalization represents an adverse patient outcome of nursing home care. This study is particularly valuable because it will examine the relationship between staffing levels, treatment patterns, and patient outcomes.

This project is in the early developmental stage.

Analysis of Long-Term Care Payment Systems

Period: April 1983-December 1988.

Total Funding: \$1,394,293.

Awardee: Center for Health Services Research, University of Colorado, 1355 South Colorado Boulevard, Suite 706, Denver, Colorado 80222.

Investigator: Robert Schlenker, Ph.D.

This project was a comparative analysis of long-term care reimbursement systems in seven States (Colorado, Florida, Maryland, Ohio, Texas, Utah, and West Virginia). The study combined an empirical analysis of nursing home costs and payments and the determinants of costs with a detailed qualitative analysis of the operations of the reimbursement systems. The comparative analysis across States was performed through a unique comparison-by-substitution method that calculated reimbursement for nursing homes in one State under the assumption that the other States' reimbursement systems were in effect. Data sources for this study included primary facility information and patient samples, as well as secondary sources such as cost reports.

The final report has been received and preparations are being made to send it to NTIS.

The final report consists of three volumes:

Volume I: A Multi-State Analysis of Medicaid Nursing Home Payment Systems.

Volume II: Administering Nursing Home Case-Mix Reimbursement Systems: Issues of Assessment, Quality, Access, Equity and Cost.

Volume III: Analyzing Nursing Home Capital Reimbursement Systems.

Additional reports are available from the University of Colorado:

Case-Mix Measures and Medicaid Nursing Home Payment-Rate Determination in West Virginia, Ohio, and Maryland, March 1984.

Overview of Medicaid Nursing Home Reimbursement Systems, March 1984.

Case-Mix and Capital Innovations in Nursing Home Reimbursement, August 1984.

An Analysis of Long-Term Care Payment Systems: Research Design, October 1984.

The Long-Term Care Policy Environment in Seven States, May 1985.

Medicaid and Non-Medicaid Case-Mix Differences in Colorado Nursing Homes, September 1985.

Case-Mix Reimbursement for Nursing Homes Services: A Three-State Simulation Model, October 1985.

Case-Mix in Connecticut Nursing Homes: Medicaid Versus Non-Medicaid, Profit Versus Non-Profit, and Urban Versus Rural Patient Groups, December 1985.

Analyzing Nursing Home Profits, May 1986.

Case-Mix Reimbursement for Colorado Nursing Homes.

Financial Impact to Beneficiaries of Nursing Home Care

Period: August 1988-August 1990.

Total Funding: \$129,888.

Awardee: Brandeis University Research Center, 415 South Street, Waltham, Massachusetts 02254.

Investigator: Korbin Liu, Sc.D.

The project will use The Urban Institute's Transfer Income Model (TRIM)-2 for State estimates and the Connecticut Nursing Home Inventory data base to calculate nursing home use and payments. The TRIM-2 model is a microsimulation model, based on the 1984 Current Population Survey, used in forecasting use and payments. The Connecticut Inventory database contains patient-specific information on all nursing home patients (private and public) from 1977 to the present. In addition, the 1985 National Nursing Home Survey will be used to analyze several dimensions of nursing home use. From the collected data, estimates will also be made for the nursing home patients' spend-down provision.

A draft report, "Changes in Duration and Outcomes of Nursing Home Stays: 1977-1985," was completed. The report concludes that changes have occurred in the overall composition of nursing home admissions from 1977 through 1985. The analysis indicates that the nursing home patients had become older, more disabled, and more likely to have been admitted for terminal care.

A draft report, "Nursing Home Length of Stay and Spend-down: Connecticut, 1977-1985" was completed. Data was available on nursing home stays over an 8-year period, October 1977 and September 1985. Person-specific records were merged with death certificates and Medicaid eligibility dates and multiple stays for individuals were studied using life table methodologies. Major study findings are:

(1) The distribution of length of nursing home stay based on person level use (multiple stay rather than single stays) is markedly different. For example, Connecticut data based on person level use indicates that 39 percent of an admission cohort are still residents at 2 years compared to only 16 percent based on single stays. This information has important implications for design of private insurance policies or public policy options.

(2) Approximately 21 percent of individuals who enter nursing homes not covered by Medicaid ultimately convert to Medicaid; the timing of spend-down was over 1 year for half of the individuals, which is longer than indicated by some other studies.

(3) The estimate of the proportion of Medicaid to total nursing home days is 55.3 percent; however, Medicaid's proportion to the cost of care is expected to be less, due to contribution of income of persons spending down.

New Jersey Respite Care Pilot Project

Period: July 1988-September 1992.

Grantee: New Jersey Department of Human Services, 222 South Warren Street, Trenton, New Jersey 08625.

Investigator: William Ditto.

For many families, caring for an elderly or chronically disabled member can be both physically and emotionally demanding. Respite care provides temporary relief to caregivers, allowing them to continue in that role for a longer period of time. A provision in the Omnibus Budget Reconciliation Act of 1986 established the New Jersey Respite Care Pilot Project to assist families with the care of elderly or functionally impaired individuals at risk of institutional placement. This project was developed to examine the effect of respite services on both caregivers and care-recipients. The purpose of the study is to determine to what extent respite care services enhance or sustain the role of the family in providing long-term care, and whether these services postpone or avert the need for institutional placement. Respite care services under this project include: homemaker, home health aide, and personal care services; short-term and intermittent companion services; adult day care; and inpatient respite in a hospital or nursing home. Peer support, training, and counseling are also provided to family caregivers.

The project began on July 1, 1988. All of New Jersey's 21 counties are participating in this program. During the first 2 years, respite care services were provided to more than 2,000 elderly or disabled clients and their families. In compliance with one of the requirements of the legislation, the State has arranged for an independ-

ent evaluation of the project to be conducted by the Institute for Health, Health Care Policy, and Aging Research at Rutgers University. The project is scheduled to end in September 1990.

Modifications of the Texas System of Care for the Elderly: Alternatives to the Institutionalized Aged

Period: January 1980–June 1991.

Grantee: Texas Department of Human Resources, 701 West 51st Street, P.O. Box 2960, Austin, Texas 78769.

Investigator: Ernest McKinney.

The purpose of this project is to reduce the growth of nursing homes in Texas and, at the same time, expand access to community care services for needy Medicaid individuals. It is being accomplished by directly changing the operating policies of the State's Title XIX and Title XX programs, specifically, by eliminating the State's lowest level of institutional care, intermediate care facility II (ICF-II). Existing organizations responsible for the State's Title XIX and Title XX programs are responsible for project implementation.

Substantial progress has been made in achieving project objectives. In March 1980, there were 15,486 individuals in the ICF-II group. As of December 1988, there were 506 ICF-II clients remaining. From March 1980 to December 1988, the total institutional population decreased from 64,820 to 54,365 clients (a reduction of 16.1 percent), while the community care population increased from 30,792 to 46,958—an increase of 52.5 percent. A final report is expected in September 1991.

Evaluation and Technical Assistance of the Medicare Alzheimer's Disease Demonstration

Period: September 1989–September 1993.

Funding: \$1,999,812.

Contractor: Institute for Health and Aging, University of California, San Francisco, 201 Filbert Street, San Francisco, California 94133.

Investigator: Robert Newcomer, Ph.D.

The Medicare Alzheimer's Disease Demonstration was authorized by Congress under Section 9342 of the Omnibus Budget Reconciliation Act of 1986 to determine the effectiveness, cost, and impact on health status and functioning of providing comprehensive services to beneficiaries who have dementia. Two models of care are being studied under this project. Both provide case management, homemaker/personal care services, adult day care, and education and counseling for family caregivers. Case management activities include assessment, care planning, service arrangement, and patient monitoring. The two models vary by their ratios of clients to case managers and the amount of reimbursement that is available to pay for demonstration services. Eight sites are participating in this demonstration:

Monroe County Long Term Care Program, Inc., Rochester, New York; Carle Clinic, Urbana, Illinois; Northeast Community Mental Health Center, Memphis, Tennessee; Good Samaritan Hospital and Medical Center, Portland, Oregon; Cincinnati Area Senior Services, Inc., Cincinnati, Ohio; Wood County Senior Citizens Association, Inc. Parkersburg, West Virginia; The Wilder Foundation, Minneapolis, Minnesota; Miami Jewish Home and Hospital for the Aged, Miami, Florida.

This contract to evaluate the demonstration and provide technical assistance to the eight sites was awarded on September 30, 1989.

The major questions the demonstration is designed to address include: 1) what factors are associated with the cost-effectiveness and impact on health status of providing an expanded package of services to Medicare beneficiaries with Alzheimer's disease or related disorders; 2) in what ways do various services provided under the demonstration affect the functional status of patients and caregivers; 3) what are the effects of the demonstration on caregiver burden; and 4) do demonstration services delay or prevent the institutionalization of persons with Alzheimer's disease.

The operational phase of the project began on December 1, 1989. At that time, the sites started enrolling clients and providing the services authorized under the demonstration. The caseload build-up period will continue through April 30, 1991, followed by a 17-month period of operations at full caseload. The demonstration is scheduled to end in May 1993.

Prior and Concurrent Authorization Demonstrations

Period: September 1987–July 1992.

Total Funding: \$827,200.

Contractor: Lewin/ICF, 1090 Vermont Ave., Washington, D.C. 20005.

Investigator: Barbara Manard, Ph.D.

Under Section 9305 of the Omnibus Budget Reconciliation Act of 1986, the Secretary of Health and Human Services is required to conduct a demonstration program concerning prior and concurrent authorization for post-hospital extended care services and home health services furnished under Part A or Part B of Title XVIII. This legislation responds to concerns expressed by home health agencies (HHAs) and skilled nursing facilities (SNFs) that under the current system of Medicare payment they cannot adequately predict what services the fiscal intermediaries (FIs) will deny as noncovered. In recent years, there has been a steady increase in the number of visits denied by FIs. It is hypothesized that prior authorization (Pennsylvania) and concurrent authorization (CA) payment approaches will reduce the number of services denied without increasing Medicare expenditures. Under Pennsylvania, providers submit treatment plans to FIs for review prior to the start of care; under CA, plans of treatment are submitted when care begins. In both approaches, the provider receives notification from the FI about how many services will be covered. This provides greater certainty about coverage and payment before services are given. The law required that the demonstration include at least four projects and be initiated by January 1, 1987, and that the Secretary must evaluate the demonstration and report to Congress on the evaluation. The evaluation and report must address:

- The administrative and program cost for prior and concurrent authorization compared with the current system of retroactive claims review.

- The impact on access and availability of post-hospital services and timeliness of hospital discharges.

- The accuracy and cost savings of payment determinations and rates of claims denials compared with the current system.

The Bureau of Program Operations, Health Care Financing Administration, implemented a home health concurrent authorization pilot project in July 1987. This project was initiated in the State of Illinois and the entire Dallas Region and is still ongoing. Lewin/ICF implemented the SNF demonstration in September 1989 at sites in Tennessee and Indiana. Lewin/ICF is responsible for evaluating both the home health pilot project and the SNF demonstration.

A Report to Congress based on Lewin/ICF's preliminary evaluation of the home health project and the design of the SNF project was submitted to Congress in August, 1990. The SNF prior authorization demonstration terminates in November 1990. Both an update of the home health pilot project and an evaluation of the SNF demonstration will be submitted to HCFA by February, 1992.

Study of Long-Term Care Quality and Nursing Homes

Period: September 1983-September 1986.

Total Funding: \$808,176.

Awardee: University of Colorado, 1355 South Colorado Boulevard, Suite 706, Denver, Colorado 80222.

Investigator: Peter Shaughnessy, Ph.D.

The purpose of this evaluation of the Robert Wood Johnson Foundation's (RWJF) Teaching Nursing Home Program (TNHP) was to assess the impact of nursing school/nursing home affiliations on patient outcomes and costs of patient care. Eleven university-based schools of nursing were funded to establish clinical affiliations with one or two nursing homes. Objectives of the study included assessing the extent to which the TNHP approach reduces hospitalizations and emergency room use, examining whether the length of nursing home stays is reduced and discharges into independent living environments are increased, and determining the program's effect on the health status and functioning of the patient. In addition to utilization and patient impacts, a cost-benefit analysis was conducted. The evaluation of this program was sponsored jointly by the Health Care Financing Administration and RWJF. (RWJF funded the evaluation from October 1986 to December 1988.) A supplement to the study was funded in June 1986 to assess whether services provided to specific types of patients differed in teaching nursing homes relative to a group of comparison nursing homes. Seven problem areas were profiled: urinary incontinence and urinary catheter, pressure sores, terminal illness, confusion, falls, diabetes, and use of sedatives.

The evaluation showed a decrease in hospitalization rates for teaching nursing home patients compared with all nursing home patients throughout the country. Differences in hospitalization rates were even greater after adjusting for case mix or risk factors. The decline was more pronounced for short stay and Medicare patients. Teaching nursing home patients had better patient status outcomes and were less likely to experience functional problems with activities of daily living. They were also less likely to be catheterized, restrained, or heavily sedated. Nurse clinicians and

nurses' aides were more involved in care planning in teaching nursing homes than they were in comparison nursing homes which may have enhanced the establishment of preventive strategies. The project's final report will soon be available from the National Technical Information Service.

Case-Managed Medicare Care for Nursing Home Patients

Period: July 1983–September 1990.

Grantee: Massachusetts Department of Public Welfare, 180 Tremont Street, Boston, Massachusetts 02111.

Investigator: Lois Simon.

The Health Care Financing Administration (HCFA) granted Medicare and Medicaid waivers to the Massachusetts Department of Public Welfare to permit fee-for-service reimbursement for the provision of medical services by physician-supervised nurse practitioners and physician assistants (NP/Pennsylvania) for residents of nursing homes. This permits increased medical monitoring that is expected to generate cost savings as a result of fewer hospital admissions and outpatient visits. Providers are responsible for managing and monitoring the health care and medical condition of all enrollees to assure that the primary care needs of nursing home patients are met in a timely fashion, often without resorting to the hospital emergency room. Initial physical exams, medical evaluation, and re-evaluations are being performed by the NP/Pennsylvania in the nursing home. The NP/Pennsylvania operates under written protocols that describe the common medical problems to be encountered and appropriate evaluation and treatment procedures. The supervising physician reviews and countersigns the NP/Pennsylvania's evaluation and prescriptions. The physician is also consulted in any unusual situation or emergency.

The RAND Corporation, as part of the Research Center Cooperative Agreement with the Health Care Financing Administration, has completed an evaluation of this project's impact on the use and cost of nursing home and hospital services. This evaluation relies primarily on Medicare and Medicaid claims data. The Pew Foundation awarded a grant to the University of Minnesota to assess the project's impact on quality of care. Section 9413 of the Omnibus Budget Reconciliation Act of 1986, mandated the continuation of this project through July 1989. The project was further extended to allow pending legislation that would have incorporated the coverage under Medicare. Section 6114 of the Omnibus Budget Reconciliation Act of 1989 provided Medicare coverage of MD/NP teams operating in nursing homes. The services under this demonstration ended on September 30, 1990. The evaluation report is completed and available through RAND (R-3822-HCFA).

Evaluation of Massachusetts Case-Managed Medical Care for Nursing Home Patients

Period: April 1985–May 1989.

Total Funding: \$393,513.

Awardee: The RAND Policy Research Center, 1700 Main Street, Santa Monica, California 90406.

Investigator: Joan Buchanan, Ph.D.

The Health Care Financing Administration granted Medicare and Medicaid waivers to the Massachusetts Department of Public Welfare to permit fee-for-service reimbursement for the provision of medical services by physician-supervised nurse practitioners and physician assistants for 6,500 residents of nursing homes. The project permitted increased medical monitoring that was expected to generate cost savings as a result of fewer hospital admissions and hospital outpatient visits. This evaluation focused on the impact of the project on the use of nursing home services and hospital emergency room and outpatient services. The University of Minnesota conducted a related evaluation of the impact of the project on quality of care.

RAND and Minnesota submitted a final report, Results from the Evaluation of the Massachusetts Nursing Home Connection Program, in October 1989. The report is available from the Rand Corporation (publication No. JR-01.) The study found improvements under the program in the quality of care and reductions in hospital costs for some patients.

Nurse Practitioner/Physician Assistant Aggregate Visit Demonstration

Period: October 1990–September 1991.

Total Funding: \$130,538

Awardee: The Urban Medical Group.

Under Section 6114(e) of the Omnibus Budget Reconciliation Act of 1989, the Medicare program provides Part B coverage for medical visits to nursing home residents provided by nurse practitioners who are members of a physician/physician assistant/nurse practitioner team. Under this legislation, the number of visits supplied to any nursing home patient is limited to an average of 1 and ½ visits per month.

Section 6114(e) mandates a demonstration project under which the visit limitation would be applied on an average basis over the aggregate total of residents receiving services from members of the provider team.

The project is in the early developmental stage. A demonstration project in Massachusetts ("Case Managed Medical Care of Nursing Home Patients"), which used NPs and Pennsylvanias to provide visits to nursing home patients, ended on September 30, 1990. The study proposes to use these existing demonstration sites for the new OBRA-89 mandated project. This will effectively eliminate the need to recruit and/or train provider teams for new sites, and will allow the study to focus on operational questions and carrier capabilities. The project will be conducted in two parts: (1) a planning and development stage, which will include finalizing the research design, obtaining consent from all providers and patients, and software development and implementation by the carrier; and (2) the actual implementation and operation of the demonstration.

Evaluation of the New York State Quality Assurance System

Period: October 1989–September 1991.

Total Funding: \$349,477.

Contractor: Abt Associates, Inc., 55 Wheeler Street, Cambridge, Massachusetts 02138-1168.

Investigator: Margot Cella.

The objectives of the New York State Quality Assurance System (NYQAS) are to link data from the case-mix reimbursement system for use in the quality assurance system and to integrate the quality assurance processes of survey/certification, inspection of care, and utilization review. The basic purpose of the evaluation is to determine which aspects of NYQAS are effective and those which are not, and why. It is hoped that this information will inform the implementation and monitoring of the Multistate Nursing Facility Case-Mix and Quality Projects, the nursing home reform provisions of OBRA-87, and the surveillance of nursing homes in general. Consistent with these objectives, the evaluation will employ a variety of qualitative and quantitative methods to assess NYQAS' reliability and validity of problem identification, monitoring and enforcement, and the impact of NYQAS on the quality of care.

This project is in the early developmental stage.

Design, Implementation, and Evaluation of a Prospective Case-Mix System for Nursing Homes in Massachusetts

Period: August 1986–December 1989.

Total Funding: \$362,312.

Awardee: Massachusetts Department of Public Welfare, Medical Assistance Division, 600 Washington Street, Boston, Massachusetts 02116.

Investigator: Susan Flanagan, M.P.H.

This project designed and implemented a prospective case-mix system for a random sample of nursing homes in Massachusetts. This payment system will test incentives for these nursing homes to admit and treat heavy-care patients while minimizing declines in quality of care. Experimental facilities will be compared with facilities that will continue to be reimbursed under the present system. There are 31 homes participating, 17 in the experimental group. The system modifies four of seven components of the nursing home reimbursement system currently used in the State. For demonstration facilities, nursing services payment is case-mix adjusted using management minutes. Incentives to admit and treat heavy-care patients are used to further modify the nursing cost center. Various financial incentives also are used to reduce other controllable operating costs.

The cooperative agreement was awarded in August 1986. During the first 2 years, project staff finalized aspects of the proposed payment system, assigned volunteer nursing homes to the experimental and control groups, and improved their quality assurance mechanisms. Implementation of the case-mix system began October 3, 1988, for 1 experimental year. Development of quality assurance indicators using this case-mix data base is in progress during the implementation year. The demonstration ends December 31, 1989. Evaluation of the demonstration will begin in January 1990. A final report is expected in late 1990.

Texas Nursing Home Case-Mix Demonstration

Period: September 1987–June 1992.

Total Funding: \$532,830.

Grantee: State of Texas Department of Human Services, P.O. Box 149030 (MC-E-601), Austin, Texas 78769.

Investigator: Pam Coleman.

The Texas Department of Human Services will conduct a 3-year demonstration to implement and evaluate a Medicare/Medicaid prospective case-mix payment system. The payment system will be based on the Health Care Financing Administration (HCFA)-Sponsored feasibility studies. The major Medicaid objectives of the project are:

- To match payment rates to resident needs.
- To promote the admission of heavy-care patients to nursing homes.
- To provide incentives to improve quality of care.
- To improve management practices.
- To demonstrate administrative feasibility of the new system.

The objective of Medicare is to develop and pilot test administrative processes for implementing a Medicare prospective payment system based on a resource-utilization-group system in coordination with Medicaid case-mix systems. The State will use a quasi-experimental design for the Medicare pilot test to compare the effect of introducing case-mix payment in an experimental catchment area versus continuing the flat rate/cost-based system in a control catchment area. The State will use a pre-post design for the Medicaid system. The case-mix classifications are based on a review of six different systems in which the New York resource utilization groups (RUGs) II explained the greatest variance of staff time. The case-mix indexes borrow major elements of the RUGs II system and some of the rationale from the Minnesota system. The Texas index of level of effort (TILE) uses four clinical groups to form clusters and develops subgroups using an activities-of-daily-living (ADL) scale. The index that will be used for the classification of Medicare patients is the RUG-T18, which uses the same clinical groups and ADL scale as are used in the New York RUGs II system. The difference occurs in the expanded rehabilitation groups for Medicare patients. Two third-party evaluations will be used, one of data reliability and a second of the validity of the data analysis methods.

During the first year, the TILE and RUG-T18 indexes were reviewed for compatibility. The RUG-T18 classification was reviewed and was placed into operation to match the HCFA Medicare coverage guidelines effective April 1988. Cost analysis of both national and State samples of Medicare providers were performed to arrive at baseline costs for calculating the rates for the RUG-T18 groups. The Texas client assessment, review, and evaluation (CARE) instrument has been reviewed and revised. The new national minimum data set (MDS) was tested on 900 residents and the interrater reliability was very good between the two instruments on similar items. The MDS will be used for Medicare classification. In the Medicare pilot, a nurse will review new admissions on site weekly to classify residents into the RUG T18 groups and give prior authorization of the Medicare stays for specific time intervals. The Medicaid payment system became operational in April 1989. The Medicare waivers are being processed and the demonstration is scheduled to become operational in 1991.

The Multi-State Nursing Home Case-Mix and Quality Demonstration

Period: June 1989-June 1993.

Total Funding: \$931,755

Awardees: State Medicaid Agencies.

This project builds on past and current initiatives with case-mix payment and quality assurance. The 5-year demonstration will design, implement, and evaluate a combined Medicare and Medicaid system in four States. The purpose of the demonstration is to test a resident information system with variables for classifying residents into homogeneous resource utilization groups for equitable payment and for quality monitoring of outcomes adjusted for case-mix. The new minimum data set (MDS) for resident assessment will be used for both payment classification and quality monitoring systems. This information will be computerized, audited, and submitted as part of the billing documentation. It will be used to develop case-mix adjusted outcome and process norms across the demonstration States. This system, also, will be used to trigger early quality reviews by State staff and provide the regular survey teams with information on potential problems in nursing facilities. The project consists of three phases: systems development and design; systems implementation and monitoring; and evaluation. There will be 2 years of developmental work before the Medicare/Medicaid classification and payment system will be ready for implementation in the demonstration States.

The project has completed a research data collection on 5000 nursing facility residents, including a field test of the (MDS). The average direct care staff time across the States is 108 minutes. Analysis of the data to develop the new multistate Medicare/Medicaid Resource Index (MSMMRI) is underway. The States implemented the MDS+ statewide in October, 1990 with the approval of the Health Standards and

Quality Bureau. In collaboration with the Circle and the University of Wisconsin, they are beginning data analysis of service utilization and outcomes. The demonstrations should begin implementation of the new payment system in October 1991.

Multi-State Case-Mix Payment and Quality Demonstration

Total Funding: \$661,613.

Awardee: New York State Department of Health and Health Research, Inc., Room 1683 Corning Tower, Albany, New York 12237.

Investigator: Steve Anderman.

New York State proposes to participate in the current four-State (Kansas, Maine, Mississippi, and South Dakota) nursing home case-mix and quality demonstration, presently in its initial phase. That demonstration uses case-mix systems for both Medicare and Medicaid that are based on the resource utilization groups (RUGs) developed in the Health Care Financing Administration (HCFA)-sponsored studies in New York and Texas. The objective of the demonstration is to test the feasibility and cost-effectiveness of a case-mix payment system for nursing facility services under Medicare and Medicaid. The four States participating are largely rural and have no previous experience using case-mix systems.

The addition of New York to the current demonstration will greatly enhance the ability to use results from the initiative nationally. New York represents a high cost, high skilled nursing facility (SNF), heavily regulated, northern urban industrialized area with larger, medically sophisticated nursing facilities. Sixteen percent of the national Medicare SNF days are incurred in New York State. New York is uniquely suited for this role since it has already implemented a complementary system for its Medicaid nursing facility payment program. New York has done extensive work on case mix, including University of Michigan and Rensselaer's development of the RUG-T18 system under the aforementioned HCFA-sponsored project.

This project is conducting the first data collection in 25 facilities, using the national minimum data set (MDS) which was field tested in the other States last spring. This data will be added to the database being analyzed to develop the new Medicare/Medicaid classification system. The Project Director was hired in September 1990.

Long-Term Care Case-Mix and Quality Technical Design Project

Period: September 1989-September 1991.

Total Funding: \$997,887.

Contractor: The Circle, Inc., 8201 Greensboro Drive, Suite 600, McLean, Virginia 22102.

Investigator: Bob Burke, Ph.D.

This 2-year contract will support the design and early implementation phase of the Multi-State Nursing Home Case-Mix and Quality Demonstration. The first step was to refine the data collection process creating consistent, reliable, and valid measurement of resident characteristics and staff time use across the four demonstration States (Kansas, Maine, Mississippi, and South Dakota). The national minimum data set (MDS) was chosen for this purpose and the first data collection was a major field test of the MDS elements. The demonstration will involve approximately 50,000 residents in 800 facilities at any one time. The second step will be to refine a resource utilization group classification system that will apply to both Medicare and Medicaid residents in nursing facilities across States. This system will account for more than 42 percent of the staff time variance in each of the several States. It must have natural breaks in the groups between residents who are expected to be short stayers versus long stayers and between residents requiring heavy technical nursing versus residents with less technical needs. A prospective case-mix payment system to be used across the States for Medicare-covered stays will be developed using the common classification system. In addition, analyses comparing outcomes under different circumstances will be conducted. A national advisory group was tasked to recommend the outcomes that are most promising for use in a quality monitoring system and to assist in the design of the quality monitoring system to be used during the operation phase of the demonstration.

This project has been staffed and the first data collection completed. The researchers from Rensselaer, the Universities of Michigan and Wisconsin and Duke are analyzing the data to develop the classification system and to study the utilization patterns and outcomes. The classification is expected to be completed by February, 1991. The Medicare payment system should be available by late spring and the States will be able to implement the new payment system beginning in October 1991.

Prevention of Falls in the Elderly

Period: September 1984-December 1989.

Total Funding: \$695,894.

Awardee: Kaiser Foundation Research Institute, Health Services Research Center, 4610 Southeast Belmont Street, Portland, Oregon 97215.

Investigator: Mark Hornbrook, Ph.D.

In September 1984, a cooperative agreement was awarded to the Kaiser Foundation Research Institute to test the cost effectiveness of a comprehensive environmental and behavioral program designed to prevent falls among persons 65 years of age or over and to estimate the net financial benefits or costs to a health maintenance organization and the Medicare program of a given level of falls prevention for a defined target population. The secondary objectives were to increase understanding of the epidemiology of falls and associated injuries, and to develop an improved method of predicting the risk of falls in an elderly population. Funding support for this demonstration was supplemented by the National Institute on Aging, the Robert Wood Johnson Foundation, and Kaiser Foundation Hospitals, Inc. This is a randomized study of 31,822, 65 years of age or older, members of Kaiser Permanente Medical Care Program in Portland, Oregon. All participants received an initial home audit to assess their environmental and physical risk factors for falls. They were then randomized into one of two groups, an intervention group and an assessment-only control group. The intervention group received a special falls prevention program that included a self-management educational curriculum and the installation of safety equipment and minor home renovations to correct identified safety hazards. Data on the incidence of falls, and associated morbidities and fall-related medical care utilization, was collected for a period of 2 years on both the control and intervention groups through self reports by the study participants. In addition, a retrospective audit of the participants' medical records was completed to validate the incidence of falls requiring medical care and to determine the associated medical care costs.

The followup period to assess the incidence of falls ended December 1987. The cooperative agreement was extended until December 1989 to allow completion of the program's evaluation. The final report, which was expected in mid-1990, has not been received.

Geriatric Continence Evaluation Contract

Period: October 1987-December 1989.

Total Funding: \$125,000.

Contractor: Mathematical Policy Research Inc., P.O. Box 2393, Princeton, New Jersey 08543-2393.

The contractor, through the subcontractor SysMetrics, Inc., is evaluating the effectiveness of the Geriatric Continence Research Project as a means of determining the relative value of experimental approaches to geriatric incontinence compared with traditional methods of treatment and care for individuals with this distressing and difficult patient-care problem. The purpose of the evaluation is to determine the cost effectiveness of successful assessment and treatment methods being tested and to assess the applicability of the methods. Policy implications for the use of cost-effective assessment and treatments are to be presented in the context of current reimbursement criteria for incontinent patients. Additionally, as part of this evaluation, SysMetrics is conducting a more general facility-level analysis designed to examine relationships among the percentages of patients who are incontinent, the percentage not toileted or needing assistance in toileting, and other facility or resident characteristics of Medicare- and Medicaid-certified nursing homes.

Final reports have been received and are being reviewed.

The Development of Long-Term Care Reform Strategy for New York's Office of Mental Retardation and Developmental Disabilities

Period: June 1988-December 1990.

Total Funding: \$115,581.

Awardee: New York State Department of Social Services, Division of Medical Assistance, 40 North Pearl Street, Albany, New York 12243.

Investigator: Howard Gold.

The New York Office of Mental Retardation and Developmental Disabilities is conducting a 2-year project to develop a comprehensive plan and waiver application that would reform the financing, regulation, and service delivery of the mentally retarded and developmentally disabled system in three districts that cover eight New York counties. The State considers the demonstration as the first step toward statewide implementation. The objectives are to:

Develop a financing system that will improve services to this population by expanding the number and types of people to be served and the types of services to be provided.

Change the manner in which quality of care is assured.

Constrain growth in Federal expenditures for these services.

Waivers would alter the Medicaid basis of payment, revise the State Medicaid plan requirements, change how Medicaid funds can be used, and implement revised quality assurance regulations. The demonstration will test an alternative financing approach that approximates recently formulated departmental policy directions as developed by the Department of Health and Human Services working group on intermediate care facilities for the mentally retarded. The project represents a major test of reform in the delivery of services for persons who are developmentally disabled.

Both national and State-level advisory panels have been convened, issues papers have been completed, and the development of a waiver application is under way. The State is also exploring the option of seeking a Medicaid 2176 home and community-based care waiver to implement this project.

On Lok's Risk-Based Community Care Organization for Dependent Adults

Period: November 1983-Indefinitely.

Grantees: On Lok Senior Health Services, 1441 Powell Street, San Francisco, California 94133 and California Department of Health Services, 714-744 P Street, Sacramento, California 95814.

Investigator: Marie Louise Ansak.

The Health Care Financing Administration granted Medicare waivers to On Lok Senior Health Services and Medicaid waivers to the California Department of Health Services. Together, these waivers permitted On Lok to implement an at-risk, capitated payment demonstration in which more than 300 frail elderly persons, certified by the Department of Health Services for institutionalization in a skilled nursing facility, are provided a comprehensive array of health and health-related services in the community. The current demonstration maintains On Lok's comprehensive community-based program but has modified its financial base and reimbursement mechanism. All services are paid for by a predetermined capitated rate from both Medicare and Medicaid (Medi-Cal). The Medicare rate is adjusted for a frail population based on the average per capita cost for San Francisco county adjusted for a frail population. The Medi-Cal rate is based on the State's computation of current costs for similar Medi-Cal recipients using the formula for prepaid health plans. Individual participants may be required to make copayments, spend down income, or divest assets, based on their financial status and eligibility for either or both of the programs. On Lok has accepted total risk beyond the capitated rates on both Medicare and Medi-Cal with the exception of the Medicare payment for end stage renal disease. The demonstration provides service funding only under the waivers. The research and development activities are funded through private foundations.

Section 9220 of the Consolidated Omnibus Budget Reconciliation Act of 1985 has extended On Lok's Risk-Based Community Care Organization for Dependent Adults indefinitely, subject to the terms and conditions in effect as of July 1, 1985, except that requirements relating to data collection and evaluation do not apply.

Frail Elderly Demonstration: The Program of All-Inclusive Care for the Elderly

Period: June 1990-October 1993.

Grantees: See below.

The Health Care Financing Administration is conducting a demonstration which replicates, in not more than 10 sites, the model of care developed by On Lok Senior Health Services in San Francisco, California. The Program for All-Inclusive Care for the Elderly (PACE) demonstration replicates a unique model of managed care service delivery for 300 to 500 very frail community dwelling elderly most of whom are dually eligible for Medicare and Medicaid coverage and all of whom are assessed as being eligible for nursing home placement according to the standards established by participating States. The model of care includes as core services the provision of adult day health care and multidisciplinary case management through which access and allocation of all health and long term care services are arranged. Physician, therapeutic, ancillary and social support services are provided on-site at the adult day health center whenever possible. Hospital, nursing home, home health, and other specialized services are provided extramurally. Transportation also is provided to all enrolled members who require it. Financing of this model is accomplished through prospective capitation of both Medicare and Medicaid payments to the provider. Demonstration sites are to assume financial risk progressively over 3 years,

as stipulated in the Omnibus Budget Reconciliation Act of 1987 (Public Law 100-203).

Five sites and their State Medicaid agencies have been granted waiver approval to provide services:

Elder Service Plan

Period: June 1989-May 1993.

Grantee: East Boston Geriatric Services, Inc., 10 Gove Street, East Boston, Massachusetts 02128.

Period: June 1989-May 1993.

Grantee: Massachusetts State Department of Public Welfare, 180 Tremont Street, Boston, Massachusetts 02111.

Providence ElderPlace

Period: June 1989-May 1993.

Grantee: Providence Medical Center, 4805 Northeast Glisan Street, Portland, Oregon 97213.

Period: October 1989-May 1983.

Grantee: Oregon State Department of Human Resources, 313 Public Service Building, Salem, Oregon 97310.

Comprehensive Care Management

Period: September 1989-August 1983.

Grantee: Beth Abraham Hospital, 612 Allerton Avenue, Bronx, New York 10467.

Period: September 1989-August 1983.

Grantee: New York State Department of Social Services, 40 North Pearl Street, Albany, New York 12243.

Palmetto SeniorCare

Period: October 1990-September 1993.

Grantee: Richland Memorial Hospital, Five Richland Medical Park, Columbia, South Carolina 29203.

Period: October 1990-September 1993.

Grantee: South Carolina State Health and Human Services, Finance Commission, P.O. Box 8206, Columbia, South Carolina 29202.

Community Care for the Elderly

Period: November 1990-October 1993.

Grantee: Community Care Organization of Milwaukee County, Inc., 1845 North Farwell Avenue, Milwaukee, Wisconsin 53202.

Period: November 1990-October 1993.

Grantee: Wisconsin State Department of Health and Social Services, P.O. Box 7850, Madison, Wisconsin 53707.

Up to five additional sites will be phased in over the next 2 years. A contract to evaluate the PACE demonstration will be awarded in fiscal year 1991.

Capitation Reimbursement for Frail Elderly

Period.—August 1988-July 1990.

Total Funding: \$74,392.

Awardee: Brandeis University Research Center, 415 South Street, Waltham, Massachusetts.

Investigator: Leonard Gruenberg, Ph.D.

This project involves examining data on Medicare nursing home certifiable beneficiaries as a means to analyze and refine the capitated reimbursement methodology being implemented in the congressionally mandated Program of All-inclusive Care for the Elderly (PACE) demonstration. The PACE demonstration will attempt to replicate the model developed by On Lok Senior Health Services in San Francisco, California.

A draft final report, Capitation Rates for the Frail Elderly, has been received and is currently under review. The report provides an analysis of the Medicare capitation rate factors used by On Lok and the PACE sites. The analysis used data from the Social Health Maintenance Organization Demonstration and the National Long-Term Care Surveys for 1982 and 1984.

Program for All-Inclusive Care for the Elderly (On Lok) Case Study

Period.—August 1989-January 1991.

Total Funding.—\$172,138.

Awardee.—University of Minnesota Policy Center, 1919 University Avenue, St. Paul, Minnesota 55104.

Investigator.—Robert Kane, Ph.D.

This study will provide a descriptive analysis of the early stages of the Program of All-inclusive Care for the Elderly (PACE) demonstration. The study will be a detailed examination of the model of service delivery provided by On Lok Senior Health Services, San Francisco, California, and the degree to which aspects of this model are successfully replicated in as many as eight sites nationwide. The results of the study are expected to have utility as subsequent sites are developed for later implementation.

Initial site visits to On Lok and PACE sites have been completed and an Interim Report has been submitted. A second round of site visits is planned for 1991.

Evaluation of the Suitability of Nonrandom Designs for the Program for All-Inclusive Care of the Elderly

Period.—July 1990–September 1990.

Total Funding.—\$14,494.

Awardee.—University of Minnesota Research Center, 1919 University Avenue, St. Paul, Minnesota 55104.

Investigator.—Roger Feldman, Ph.D.

The Health Care Financing Administration is implementing a demonstration project to test the replicability and cost effectiveness of the Program of All-inclusive Care of the Elderly (PACE). This demonstration is designed to test a unique model of totally integrated, managed care service delivery for the very frail community dwelling elderly. Due to a variety of reasons, evaluation design in which eligible participants are randomly assigned to treatment and control groups is not feasible. The purpose of this project is to study the suitability of nonrandom designs for this demonstration.

This project is completed and the final report has been received. The report agrees that a random design is not appropriate for the evaluation of the PACE demonstration and that other methods could control for selection bias.

S/HMO SITES

Social Health Maintenance Organization Project for Long-Term Care.

Period.—August 1984–September 1992.

Award.—Grants:

In accordance with Section 2355 of Public Law 98-369, this project was developed and is currently implementing the concept of a social health maintenance organization (S/HMO) for acute and long-term care. A S/HMO integrates health and social services under the direct financial management of the provider of services. All services are provided by or through the S/HMO at a fixed annual prepaid capitation sum.

Status: Four S/HMO demonstration sites include two HMOs that have added long-term care services to their service packages and two long-term care providers that have added acute care services to their service packages. The sites have developed a common service package, financing plans, and risk-sharing arrangements. The demonstration sites utilize Medicare and Medicaid waivers. All four sites initiated service delivery by March 1985. During the first 30 months of operations, the Federal and State governments shared financial risk with the sites. This risk sharing ended August 31, 1987. The S/HMO sites are:

Elderplan, Inc.

Grantee: Elderplan, Inc., 1276 50th Street, Brooklyn, N.Y. 11219.

Senior Plus

Grantee: Group Health Inc. and Ebenezer Society, 2829 University Avenue, SE., Minneapolis, Minn. 55414.

Mediare Plus II

Grantee: Kaiser-Permanente Center for Health Research, 4610 Southeast Belmont Street, Portland, Ore. 97215-1795.

SCAN Health Plan

Grantee: Senior Care Action Network, 521 East Fourth Street, Long Beach, Calif. 90802.

Evaluation of Social Health Maintenance Organization Demonstrations

Period.—September 1985–November 1990.

Total Funding.—\$3,547,934.

Contractor.—University of California, San Francisco, Center for Health and Aging, San Francisco, California 94143.

Investigator.—Robert Newcomer, Ph.D.

The social health maintenance organization (S/HMO) seeks to enroll, voluntarily, persons 65 of age or over in an innovative prepaid program that integrates medical, social, and long-term care delivery systems. The S/HMO merges the health maintenance organization concepts of capitation financing and provider risk sharing developed by the Health Care Financing Administration (HCFA) under its Medicare capitation and competition demonstrations with the case management and support services concepts underlying the Department of Health and Human Services (DHHS)-sponsored long-term care demonstrations serving the chronically ill aged. Preliminary evaluation results were submitted to Congress (mandated by Public Law 98-369) and will be used by HCFA and DHHS to assess whether the S/HMO concept should be fostered through changes in prepaid Medicare contracting regulations.

This contract was awarded in September 1985. An interim Report to Congress was forwarded in August 1988. A copy of the report, "Evaluation of the Social/Health Maintenance Organization Demonstration," may be obtained from the National Technical Information Service, accession number PB89-215446; the evaluation and data collection plan for the demonstration is available as a technical appendix, accession number PB89-191779. The data collection phase has been completed. Data analysis will be completed, and the final report will be written by August, 1991.

Demonstration of Medicare Payment for Community Nursing Organizations

Period: August 1988-July 1991.

Total Funding: \$326,409.

Awardee: Project Hope Research Center, Two Wisconsin Circle, Suite 500, Chevy Chase, Maryland 20815.

Investigator: Burton Dunlop, Ph.D.

The purpose of this project is to assist the Health Care Financing Administration in designing a demonstration project (consisting of at least 4 sites) to provide payment to Community Nursing Organizations (CNOs) for home health services, durable medical equipment and certain ambulatory care furnished to Medicare beneficiaries on a prepaid, capitated basis. The legislation specifies that two different capitated payment methods will be implemented in the demonstration. Before the demonstration can begin, detailed planning and implementation of the general requirements of the congressional mandate have to be undertaken. This includes: establishing the organizational requirements and standards for CNOs, developing a detailed methodology for computing the payment rates, and preparing an implementation plan for the demonstration which includes developing site selection criteria, soliciting application for participation in the project from eligible organizations, determining quality assurance mechanisms and marketing strategies appropriate for these sites, assisting in evaluating proposals, selecting demonstration sites, and developing an evaluation strategy.

Development activities are still under way. Implementation of the demonstration will begin in 1991 after the completion of these activities.

Implementation of Home Health Agency Prospective Payment Demonstration

Period: June 1990-June 1995.

Total Funding: \$1,629,606.

Contractor: Abt Associates, Inc., 55 Wheeler Street, Cambridge, Massachusetts 02138.

Investigator: Henry Goldberg.

The purpose of this project is to implement a demonstration testing alternative methods of paying home health agencies on a prospective basis for services furnished under the Medicare program. The demonstration will test two prospective payment approaches—(1) payments per visit by type of discipline, and (2) payments per episode of Medicare-covered home health care.

Abt Associates began recruitment of HHAs to participate in the first phase of the demonstration, involving the per-visit payment method, in June 1990. This phase begins operations on October 1, 1990. Recruitment of HHAs to voluntarily participate in this first phase of the demonstration will continue through June 30, 1991. HHAs that agree to participate enter the demonstration at the beginning of their next fiscal year.

The implementation of the second phase, involving the per-episode payment method, is scheduled to begin in 1992. The study design calls for recruitment of 67 HHAs from five States (California, Florida, Illinois, Massachusetts, and Texas) in the first phase of the demonstration, and an additional 66 HHAs to participate in the second phase beginning in 1992.

In each phase, HHAs that agree to participate in the demonstration are randomly assigned to either the prospective payment method or to a control group that con-

tinues to be reimbursed in accordance with the Medicare current retrospective cost system.

Evaluation of the Home Health Prospective Payment Demonstration

Period: September 1990–September 1995.

Total Funding: \$2,858,676 (Phase I).

Contractor: Mathematica Policy Research, Inc., Box 2393, Princeton, New Jersey 08543.

Investigator: Barbara Phillips, Ph.D.

This contract is to evaluate Phase I of a demonstration designed to test the effectiveness of using a prospective payment method to reimburse Medicare-certified home health agencies (HHAs) for services provided under the Medicare program. In Phase I, a per-visit payment method which sets a separate payment rate for each of six types of home health visits (skilled nursing, home health aide, physical therapy, occupational therapy, speech therapy, and medical social services) will be tested. The contract will evaluate the effects of this payment method on HHA's operations, the quality of the services they deliver to Medicare beneficiaries, and Medicare expenditures. In addition, this evaluation will analyze the relationship between patient characteristics and the cost and use of HHA services in order to develop improved methodologies for adjusting prospective payment rates for case-mix variations.

The demonstration began operations on October 1, 1990. The evaluation effort is in the early developmental stage.

FUTURE DIRECTIONS FOR LONG-TERM CARE

During 1990, HCFA devoted substantial staff resources on the further development and implementation of demonstrations to test the cost-effectiveness of prospective payment systems for nursing homes and home health agencies and the development of quality measures to improve the quality of care in these settings.

We will continue to test alternative financing schemes for long term care services, including patient-related or case-mix based prospective payment for SNF and ICF levels of care. Implementation of demonstration projects of prospective payment methods for Medicare home health services and Medicare skilled nursing facility services will continue in 1990. Extensive efforts will continue to be directed to the testing and evaluation of capitated payment approaches for acute and long term care. We also intend to test the effectiveness of innovative State, local, and private programs to promote home care by the family or by other community support arrangements, such as in-home or other support services (adult day care, adult foster care, or shared housing), which substitute for or deter the use of institutional care for persons in need of long term care services. These efforts will include the continued operation of a large-scale demonstration directed at victims of Alzheimer's disease and related disorders.

We also will develop and test outcome-oriented measures of quality for nursing home and home health services and the applicability of using payment generated data to monitor quality. In this light, we will continue to develop a multi-State case-mix payment demonstration for nursing homes that integrates patient assessment and payment information into the survey and certification process to improve the quality assurance oversight of these providers.

Another very important area that will continue to be explored is alternative financing mechanisms for long term care. Although the majority of the elderly are covered by both Medicare and supplemental insurance, a large portion of long term care services remain uncovered. Medicaid covers long term nursing care, but only after the elderly individuals have depleted their resources. Research is continuing that will identify the sources of financing for long term care at various points throughout institutionalization. This research will further examine characteristics of individuals who come to rely upon Medicaid for payment for their care. By identifying the risks associated with nursing home use, we hope to be able to propose improved methods of paying for this care. One alternative being studied as a solution for some of the elderly's problems in financing long term care is life care centers. Other ORD financing research continues to examine various States' reimbursement of long term care in order to assess the feasibility of recommending policy changes, e.g., prospective payment for SNF care.

Essential to the development of future long term care policies is the support for data collection and data analyses from projects that gather detailed information from representative national samples or other large segments of the elderly population. Research is continuing on the estimated future acute and long term care utilization based on information from available surveys on the morbidity, disability, and

mortality of different birth cohorts. Data from the 1982 and 1984 Long Term Care surveys are being analyzed and plans continue for the 1989 survey. Data on the Medicaid program continue to be available on a person-level basis for some States from the Tape-to-Tape project.

OFFICE OF HUMAN DEVELOPMENT SERVICES: TITLE XX SOCIAL SERVICES BLOCK GRANT PROGRAM

The major source of Federal funding for social services programs in the States is Title XX of the Social Security Act, the Social Services Block Grant (SSBG) program. The Omnibus Budget Reconciliation Act of 1981 (Public Law 97-35) amended Title XX to establish the SSBG program under which formula grants are made directly to the 50 States, the District of Columbia, and the eligible jurisdictions (Puerto Rico, Guam, the Virgin Islands, American Samoa, and the Commonwealth of the Northern Mariana Islands) for use in funding a variety of social services best suited to the needs of individuals and families residing within the State. Public Law 97-35 also permits States to transfer up to ten (10) percent of their block grant funds to other block grant programs for support of health services, health promotion and disease prevention activities, and low-income home energy assistance.

Under the SSBG, Federal funds are available without a matching requirement. In fiscal year 1990, a total of \$2,762 billion was allotted to States. Within the specific limitations in the law, each State has the flexibility to determine what services will be provided, who is eligible to receive services, and how funds are distributed among the various services within the State. State and/or local Title XX agencies (i.e., county, city, regional offices) may provide these services directly or purchase them from qualified agencies and individuals.

A variety of social services directed at assisting aged persons to obtain or maintain a maximum level of self-care and independence may be provided under the SSBG. Such services include, but are not limited to: adult day care, adult foster care, protective services, health-related services, homemaker services, chore services, housing and home maintenance services, transportation, preparation and delivery of meals, senior centers, and other services that assist elderly persons to remain in their own homes or in community living situations. Services may also be offered which facilitate admission for institutional care when other forms of care are not appropriate. Under the SSBG, States are not required to submit data that indicates the number of elderly recipients or the amount of expenditures provided to support specific services for the elderly. States are required, prior to the expenditure of funds under the SSBG, to prepare a report on the intended use of the funds including information on the type of activities to be supported and the categories or characteristics of individuals to be served. States are also required to report annually on activities carried out under the SSBG. Beginning with fiscal year 1989, the annual report must include specific information on the numbers of children and adults receiving services, the amount spent in providing each service, the method by which services were provided, i.e., public or private agencies, and the criteria used in determining eligibility for each service.

Based on an analysis of pre-expenditure reports submitted by the States for fiscal year 1989, the list below indicates the number of States providing certain types of services to the aged under the SSBG.

Services:	Number of States ¹
Home-Based Services ²	42
Disabled Services	38
Adult Protective and Emergency Services	30
Transportation Services	27
Adult Day Care	26
Health Related Services	21
Information and Referral	20
Home Delivered/Congregate Meals	20
Adult Foster Care	10
Housing Improvement	11

¹ Includes 50 States, the District of Columbia, and the five eligible territories and insular areas.

² Includes homemaker, chore, home health, companionship, and home maintenance services.

In enabling the elderly to maintain independent living, most States provide Home-Based Services which frequently includes homemaker services, companion and/or chore services. Homemaker services may include assisting with food shopping, light housekeeping, and personal laundry. Companion services can be personal

aid to, and/or supervision of aged persons who are unable to care for themselves without assistance. Chore services frequently involve performing home maintenance tasks and heavy housecleaning for the aged person who cannot perform these tasks.

As reflected above, 30 States currently provide Adult Protective and Emergency Services to persons generally sixty years of age and over. These services may consist of the identification, receipt, and investigation of complaints and reports of adult abuse. In addition, this service may involve providing counseling and assistance to stabilize a living arrangement. If appropriate, Adult Protective and Emergency Services may also include the provision of, or arranging for, home based care, day care, meal service, legal assistance, and other activities to protect the elderly.

AGING AND DEVELOPMENTAL DISABILITIES PROJECTS

"ADD-TIP" NATIONAL IMPLEMENTATION PROJECT

Grantee: Institute for the Study of Developmental Disabilities, Indiana University.

Project Director: Barbara Hawkins, Re.D.—(812) 855-6508.

Project Period: 9/30/88-9/29/90, FY'88—\$95,565, FY'89—\$91,000, FY'90—\$90,000.

The "ADD-TIP" National Implementation Project has as its goal the immediate and long-term widespread national training of manpower across the different service sectors that serve aging persons with developmental disabilities in order to improve service to and planning for this population. About 300 critical service providers and administrators in Indiana will be trained using a state-of-the-art training package and field-tested training methodologies. A flexible inservice training model will evolve which can be used across the aging and developmental disabilities service sectors. About twenty master trainers will receive experience in such training and also in the training of older trainers, resulting in an additional cadre of about 100 national trainers; this national network of trainers will be able to undertake all aspects of future training. Important databases will be established by rigorous evaluation techniques to assess actual manpower impact due to project implementation. Promotion and dissemination of project products and findings to state, regional and national organizations will involve numerous publications and presentations.

"PROGRAM GOALS AND OBJECTIVES FOR THE UNIVERSITY OF MIAMI CENTER ON AGING AND DEVELOPMENTAL DISABILITIES"

Grantee: Mailman Center for Child Development, University of Miami School of Medicine.

Project Director: John Stokesberry, Ph.D.—(305) 326-1043.

Project Period: 9/30/88-9/29/90, FY'88—\$77,500, FY'89—\$91,000, FY'90—\$90,000.

The UM/CADD will focus on training professionals, policy makers, providers and consumers in both the aging services network and the DD service network to improve coordination and quality of service delivery in these two networks. Community organizing and systemic change activities will be an integral part of the CADD's work plan. The CADD has six goals. To conduct training for both networks, to create and nurture a community consortium first in Dade County and then in Broward County, to build public awareness through the media, to conduct research in needs assessment for the older DD population, to stimulate systemic changes in the administration, policy and program approaches affecting the aging DD population in Dade County and the State of Florida, and to stimulate innovative programs and exemplary service models for replication in both networks.

Project outcomes will include training sessions designed for three distinct audiences (providers/professionals, policy makers/administrators, and consumers); creation of at least two community consortia; a quarterly newsletter; media coverage; an annual policy workshop; a needs assessment survey of older DD residents of Dade County; a survey of training needs of providers in the aging and DD networks, and development of a resource center for students, consumers and providers.

"IMPROVING SERVICES TO ELDERLY PEOPLE WHO ARE DEVELOPMENTALLY DISABLED: TRAINING, SERVICE, AND DISSEMINATION"

Grantee: Shriver Center, University Affiliated Program, Waltham, MA.

Project Director: Harry Beyer, J.D.—(617) 642-0101.

Project Period: 9/30/88-9/29/90, FY'88—\$77,500, FY'89—\$91,000, FY'90—\$90,000.

The Shriver Center Aging Project includes five primary activities—pre-service training of graduate students, development, refinement and implementation of service models, in-service training and technical assistance to practicing professionals and paraprofessionals, evaluation of impact service models, and identification of

service gaps. Unique aspects of the project include an emphasis on the evaluation of non-medical problems such as housing needs, leisure-time use, spiritual needs, adjustment social changes associated with aging, and legal needs. Trainee composition reflects the evaluation orientation and includes students from programs such as law, leisure studies, social work, and the ministry. Particular emphasis is being given to the development of curriculum addressing legal and ethical issues.

"THE UMKC INTERDISCIPLINARY TRAINING CENTER ON GERONTOLOGY AND DEVELOPMENTAL DISABILITIES"

Grantee: University Affiliated Program for Developmental Disabilities, University of Missouri at Kansas.

Project Director: Phyllis Kultgen, Ph.D.—(816) 276-1770.

Project Period: 9/30/88-9/29/90, FY'88—\$77,500, FY'89—\$91,000, FY'90—\$90,000.

The purpose of this project is to establish an Inter-disciplinary Training Center on Gerontology and Developmental Disabilities at the University of Missouri-Kansas City. This center represents a joint effort among the UMKC University Affiliated Program (UAP), the UMKC Center on Aging Studies, selected University units, and a strong consortia of provider agencies. Significant collaboration and support from the State Division of Developmental Disabilities, the Division of Aging, and other UAPs across the country has been received. The primary outcomes of this long-term project will be:

- (1) An Interdisciplinary University Based Training Program. This will include infusion of knowledge on developmental disabilities and aging in courses of both the social sciences and allied health disciplines. In addition, an interdisciplinary track on aging and developmental disabilities will be provided as a 15 hour academic certificate. Activities at the University level will be jointly sponsored and conducted by both the UAP staff and the Center on Aging Studies staff.

- (2) An Interdisciplinary Outreach Training Program. This program will be established for service providers and state agency staff. The unique aspect of this outreach training program is that it will build on the capacity and expertise within the system to jointly train providers.

- (3) The Establishment of Exemplary Service Sites to Facilitate Both Preservice and Inservice Training. Plans have been generated to develop six exemplary service sites. These sites can be used for student placement as well as information dissemination and technical assistance activities.

The new interdisciplinary Ph.D. program, recently established at UMKC, supports the efforts of the above goals and outcomes.

"INTERDISCIPLINARY TRAINING FOR PROFESSIONAL AND PARAPROFESSIONAL PERSONNEL: A COLLABORATIVE APPROACH TO IMPROVE SERVICES FOR SENIORS WITH DEVELOPMENTAL DISABILITIES IN RURAL AREAS"

Grantee: Montana University Affiliated Program, University of Montana.

Project Director: Philip Wittekend, M.S.—(406) 243-5467.

Project Period: 9/30/88-9/29/90, FY'88—\$77,500, FY'89—\$91,000, FY'90—\$90,000.

The Montana University Affiliated Program (MUAP) proposes to train professional and paraprofessional direct care providers in the areas of aging and developmental disabilities with particular attention being given to the provision of services in rural/remote areas. A concurrent goal is to collaborate with developmental disabilities and generic aging networks throughout Montana and neighboring states to share existing resources and expertise to improve the services for seniors with developmental disabilities. Objectives for this project are directed toward providing training and collaboration activities in both aging and developmental disabilities systems throughout Montana and neighboring states, relevant to improving the quality of life for seniors who are developmentally disabled.

- (1) Coordinate statewide training efforts with agencies providing services for seniors.

- (2) Provide preservice training in the combined areas of aging and developmental disabilities.

- (3) Provide inservice training for professional and paraprofessional direct care personnel at all levels of both aging and developmental disabilities networks.

- (4) Provide education for citizens to increase awareness of both aging and developmental disabilities.

- (5) Conduct a multi state conference to disseminate knowledge and to obtain input for training and resource development.

- (6) Provide consulting/training to neighboring states of Wyoming, Idaho, and North Dakota.

- (7) Disseminate project results and materials.

"TRAINING PROGRAM IN AGING AND DEVELOPMENTAL DISABILITIES"

Grantee: University of Rochester, University Affiliated Program.

Project Director: Jenny C. Overeinder, ACSW—(716) 275-2986.

Project Period: 9/30/88-9/29/90, FY'88—\$77,500, FY'89—\$91,000, FY'90—\$90,000.

The Training Program in Aging and Developmental Disabilities in Western New York is a joint program of the University Affiliated Program for Developmental Disabilities and the Center on Aging of the University of Rochester Medical Center. It plans to expand existing and create new linkages between developmental disabilities, gerontology and geriatric educational systems in Rochester, Utica and Buffalo, New York, in order to offer preservice and continuing education in aging and developmental disabilities. Initially, efforts will be directed at collaborative training with local service providers, to provide immediate impact on delivery of direct and support services. Subsequently, short term preservice training on the undergraduate and graduate level will be delivered to impact on a broad spectrum of students. Finally, for a smaller number of advanced trainees, more intensive long-term educational experiences will be offered.

Objectives, in addition to establishing a program management structure are to develop a program faculty, collect curriculum materials, develop inservice and continuing education programs, develop preservice programs and sponsor regional workshops as well as an international conference. Expected outcomes include increased awareness, knowledge and skills for a large number of providers, policy makers, students and faculty through the establishment of a Regional Center. Specifically, it is anticipated that at least 15 persons will be identified who will teach various subjects related to this topic, that about 100 persons per year will participate in inservice educational series, and that about 200 students per year will receive instruction through undergraduate, graduate and certificate programs on the university level. Training models, an extensive library as well as a training data base will be made available.

"AGING AND DEVELOPMENTAL DISABILITIES: CLINICAL ASSESSMENT, TRAINING, AND SERVICE"

Grantee: Waisman Center UAP, University of Wisconsin.

Project Director: Gary B. Seltzer, Ph.D.—(608) 263-5245.

Project Period: 9/30/88-9/29/90, FY'88—\$79,407, FY'89—\$79,407, FY'90—\$90,000.

The training grant has three goals: 1) to facilitate increased collaborative work on aging and developmental disabilities among the Waisman Center, the University of Wisconsin Institute on Aging, the Wisconsin Bureau on Aging, the Developmental Disabilities Office, the Wisconsin Bureau for Long-Term Support, and community-based service providers in Wisconsin; 2) to conduct training programs for professionals and paraprofessionals on aging and developmental disabilities; and 3) to develop the Waisman Clinic on Aging and Developmental Disabilities. The achievement of the first two of these goals will be accomplished through a series of training conferences and seminars for professionals, paraprofessionals, faculty, and executives serving in the legislative, human services, or health systems and working in the fields of aging and/or developmental disabilities. During the first year of the grant, a state-wide survey will be conducted of all agencies in Wisconsin that provide services to aging persons and/or persons with developmental disabilities. This survey is expected to provide a data base for training and collaboration among program planners, providers, and policy analysts.

The Waisman Clinic on Aging and Developmental Disabilities will be developed by the Center in conjunction with collaborating agencies. It will use a computer assisted assessment approach and will develop model service protocols and cost data. Interdisciplinary training on aging and developmental disabilities will be conducted.

"A QUALITY OF LIFE/EXPRESSIVE ARTS/PHYSICAL FITNESS INNOVATIVE TRAINING SERVICE PROGRAM FOR DEVELOPMENTALLY DISABLED PERSONS IN N.E. GEORGIA SENIOR SITES"

Grantee: University of Georgia University Affiliated Program.

Project Director: Claire B. Clements, Ed.D.—(404) 542-3960.

Projected Period: 9/30/88-9/29/90, FY'88—\$87,114, FY'89—\$117,735, FY'90—\$90,000.

The purpose of the project is to demonstrate that old age for developmentally disabled persons can be a time of fulfilling activity and creativity. The project will develop implement, research, and disseminate drama, art, dance, and fitness programs to improve these persons' quality of life and integration into the existing service system.

DEPARTMENT OF HEALTH AND HUMAN SERVICES
ADMINISTRATION ON AGING
REPORT FOR FISCAL YEAR 1990

INTRODUCTION

This report describes the major activities of the Administration on Aging (AoA) in Fiscal Year 1990. Title II of the Older Americans Act of 1965 (the Act) established the Administration on Aging as the principal Federal agency for carrying out the provisions of the Act. The 1987 Amendments to the Act reaffirmed the responsibilities of AoA, State Agencies, and Area Agencies to assure that community systems serving older people are established, strengthened, and extended throughout the nation. Through the Amendments, Congress also reaffirmed the need for strong partnerships and for effective coordination on behalf of older people. Congressional action also underscored concern for the most vulnerable elderly and emphasized the need to assure that priority focus is continued on the establishment and improvement of comprehensive coordinated community based systems of service.

The Older Americans Act seeks to remove barriers to economic and personal independence for older persons and to assure the availability of appropriate services for those older persons in the greatest social or economic need. The provisions of the Act are implemented primarily through a national "network on aging" consisting of the Administration on Aging at the Federal level, State and Area Agencies on Aging established under Title III of the Act, and the agencies and organizations providing direct services at the community level. In FY 1990, Congress appropriated \$747,495,516 to support programs and activities to implement the provisions of the Act, which are administered by AoA. This excludes \$185,000 available for the Federal Council on the Aging under the Older Americans Act appropriation. (See Appendix I for a summary of AoA's budget for FY 1990.)

This report is divided into five sections. Section I describes AoA's roles and functions. It highlights various activities undertaken by AoA, in partnership with other Federal agencies and private organizations, to launch new national initiatives and foster the coordination of Federal programs related to older persons. Section II provides an overview of the provisions of Title III of the Older Americans Act. It summarizes the principal activities of the network of State and Area Agencies on Aging in FY 1990. Section III describes the Title VI program of grants to Indian tribal organizations and Native Hawaiians and the efforts of the Administration on Aging in assessing outreach to older Native Americans. Section IV presents a summary of AoA's FY 1990 discretionary activities under Title IV, and a description of the FY 1990 special activities and initiatives conducted by AoA designed to improve the capacity of State and local governments to provide quality long-term care for older persons. Section V describes AoA's evaluation activities during FY 1989.

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SECTION I - THE ADMINISTRATION ON AGING

Role and Function of AoA

The Administration on Aging (AoA) is located in the Department of Health and Human Services (DHHS). The agency is headed by a Commissioner on Aging, who is appointed by the President with confirmation by the Senate and who reports directly to the Secretary. Joyce Berry, Ph.D., was appointed Acting Commissioner on Aging in April, 1989, following the acceptance of the previous Commissioner's resignation. She was subsequently nominated by President Bush and unanimously approved by the Senate. She was sworn in as U.S. Commissioner on Aging in March of 1990.

AoA programs are administered through a Central Office located in Washington, D.C. and ten Regional Offices. Title II of the Older Americans Act, as amended, describes the basic roles and functions of AoA. Chief among these are to serve as an effective and visible advocate for older persons (including American Indians, Alaskan Natives and Native Hawaiians) within the Department and with other agencies and organizations at the national level and to administer the programs authorized by Congress under Titles III, IV, and VI of the Act.

AoA provides policy advice to the Secretary of Health and Human Services in matters affecting older Americans and information to other Federal agencies and to Congress on the characteristics, circumstances and needs of older persons. The Agency also reviews and comments on departmental policies and regulations concerning services which affect the health and general well-being of older persons.

During FY 1990, the Administration on Aging continued its efforts to assist vulnerable older persons and their families in finding appropriate help to maintain their independence within their own communities and to delay or prevent unnecessary institutionalization. AoA believes that these efforts can best be achieved by providing State and Area Agencies on Aging with the flexibility that allows them to strengthen existing local systems to make them more visible, easily accessible, and responsive to the needs of older Americans, particularly the most vulnerable. The building and strengthening of coordinated community services systems for older persons and their families continued to be the overarching goal of efforts undertaken by AoA during FY 1990. AoA continues to work with State and Area Agencies on Aging to develop ways in which all available resource groups (i.e., public, private and voluntary, as well as dedicated individuals) can effectively work together to create comprehensive and responsive community systems dedicated to maintaining the independence of older Americans.

Toward this end, efforts continue to focus on strengthening the roles of State and Area Agencies on Aging to help enhance, but not replace, individual self-sufficiency, family caregiving, and other traditional forms of community support. AoA recognizes that the Area Agency on Aging is the key organization that can forge the most effective and efficient linkages between existing systems of services within each community. Therefore, AoA works with State and Area Agencies on Aging to strengthen efforts that will build a system of services that provide a continuum of care for older persons, tailored to meet the needs and circumstances of individual communities.

AoA - An Effective Advocate For Older Persons

"Celebrate America's Coming of Age" was the theme for the 1990 Older American's Celebration in May and the Silver Anniversary of the Older Americans Act which was signed into law on July 14, 1965. This theme focuses on the fact that the aging of our population is changing not only the way we live and work but the types of services, products, and housing that we need. The "Aging of America" is also changing our individual and family life, our community structure, and our expectations of what our Nation's institutions should provide and how they should provide it.

It is vitally important that we, as a Nation, plan for the needs of the increasing number of persons who will be older Americans in the 21st century. We must also recognize that there is a vast reservoir of talent, knowledge, and expertise that older Americans offer our Nation, and begin to make better use of their valuable resources in new and innovative ways.

As the focal point within the Federal government for aging-related concerns, the Administration on Aging provides leadership to other Federal agencies, the national network on aging, and other public and private sector agencies, organizations and corporations relative to their efforts on behalf of older persons. Toward this end, AoA continues to develop and implement a variety of special initiatives aimed at improving the quality of life for older persons.

Goals for Fiscal Year 1991 and Beyond

In Fiscal Year 1989 the Administration on Aging (AoA) published eight goals which were the outcome of an extensive dialogue between AoA and other members of the aging community. That dialogue continued after publication of the goals and, in December, AoA convened a Future Directions Workshop, where more than 60 members of the aging community met to formulate recommendations on how AoA should proceed to set its priorities and allocate its resources in order to begin implementation of those eight published goals. The FY 1990 Discretionary Funds Announcement and the AoA 1990 Annual Work Plan reflected this continuing dialogue as well as many of the recommendations made by the participants of the Future Directions Workshop.

The eight goals provide a framework for a rich and ambitious agenda of action both for AoA and the agencies of the aging network. During FY'90, AoA took the first steps in setting in motion multi-year initiatives designed to achieve the published goals. Likewise aging network agencies initiated action directed to that same objective.

In FY 1991, AoA and the aging network will continue to build upon the groundwork provided by these goals. An action agenda will be pursued which will result in concrete achievements that benefit the lives of older persons. Consequently, AoA is reissuing the goals published last year and adopting them as the policy and program framework for AoA and the aging network during FY 1991. The goal areas are: (1) Public/Private Partnerships, (2) Older Persons as a Resource, (3) Strengthening the Family and Generational Bonding, (4) Prevention and Alternatives to Institutional Care, (5) Promotion and Enhancement of Effective Community Based Service Systems, (6) Targeting - Strategic Resource Allocation, (7) Manpower Development and (8) Preparing for the 21st Century - Challenges and Opportunities of an Aging Society.

Commissioner on Aging Forums

In FY 1990, the U.S. Commissioner conducted five field forums to obtain the views of knowledgeable individuals and organizations concerning the reauthorization of the Older Americans Act. The Commissioner received testimony from the directors and staff of State and Area Agencies on Aging, service providers, elderly consumers of services, and representatives of national, State and local organizations in the field of aging.

At the forums, participants were provided an opportunity to express their views on nutrition and supportive services, research, demonstrations and training, and Native American Programs. The forums were held in Denver, Colorado, Atlanta, Georgia, San Francisco, California, Philadelphia, Pennsylvania, and Chicago, Illinois.

Topics presented seemed to be shaped by a sense that the size and needs of the elderly population are increasing, while the buying power of the funds available has decreased. In fact, the numbers of the elderly (60+) increased during the last 10 years from 25.7 million to 31.6 million people, an increase of 23%. During those 10 years, the AoA budget increased incrementally, but the buying power of the AoA budget declined by 36%. The statements by forum participants often described strains resulting from increasing numbers of older persons in need of various community-based services.

Forum participants noted that the numbers of persons in the "old-old" (85+) category are growing much faster than the elderly population in general. The changing older population is placing increasing demands and strains on American families. Families are estimated to provide over 75% of the care provided to the elderly. Therefore, the maintenance or enhancement of family involvement in the care of older family members emerges as an increasingly important role of community service systems for the elderly.

There was substantial discussion at the forums of potential supplemental resources for Older Americans Act programs and ways in which the Act can be amended to more easily access resources. There was some discussion of private sector firms as potential purchasers of services on behalf of their employees who are caregivers and as a source of contributions to expand community services. Also, there is a widespread conviction that the National Network on Aging can increase its already impressive use of volunteers. To increase services for those most in need, there was a discussion of requiring elderly persons with the ability to pay to participate in the cost of services. There was general opposition to increasing the age of eligibility for services as a means of diminishing the scale of the service population. However, there was widespread support for other means of targeting services to these older individuals who are in greatest economic or social need, with particular attention to low-income minority older persons. One possibility that was discussed is to require that intra-State funding formulas required under the Act contain at least one factor based on the proportion of low-income minority elderly in each planning and service area.

Community Achievement Awards

For the third year, the Administration on Aging recognized communities which have made significant progress in developing exemplary systems of service for older Americans. These awards are determined through a competitive process wherein each State is invited to nominate one of its communities for an award.

The focus for the 1990 Community Achievement Award Initiative was public/private partnerships. The award winning partnerships were expected to demonstrate accomplishments in enhancing or expanding services for older persons in ways which could be replicated by other communities.

Among 29 competitive nominations, communities in 10 States were judged to have developed exemplary public/private partnerships (Alabama, California, Massachusetts, North Carolina, Oklahoma, Pennsylvania, Puerto Rico, Rhode Island, Texas, and Utah). These partnerships improved or expanded services for older persons in areas of housing, nutrition, health, intergenerational programs, outreach, transportation, day care, and recreational services. Each of these States received grants of approximately \$40,000 for the implementation of follow-up activities all designed to promote additional public/private partnerships within the State. The creativity, foresight, generosity and hard work of thousands of individuals and the commitment of business, corporations, public organizations, and civic groups made these award-winning partnerships possible.

AOA developed a brochure which describes each of the award-winning community public/private partnerships. Copies of the brochure have been sent to each State use in the promotional activities.

Each year, the Administration on Aging honors Community Achievement Award winners in a publicized ceremony in Washington, D.C. Additionally, the initiative has generated much publicity in the award-winning communities and States. Wide media coverage has been reported. Further, Community Achievement Award honorees have been recognized through proclamations from State Governors, Members of Congress, and have received recognition at meetings and annual conferences of organizations concerned with Aging issues.

Since the Community Achievement Awards initiative was implemented in 1988, a total of 33 different communities across the nation have received awards.

The Federal Interdepartmental Task Force on Aging

At the national level, AoA's leadership role places major emphasis on developing collaborative relationships with other Federal agencies to facilitate the development of methods to achieve a coordinated response to the needs, problems, and concerns of older persons. In this regard, AoA established the Federal Interdepartmental Task Force on Aging and convened the first meeting on June 20, 1990. The primary mission of the Task Force is to identify issues for policy and program coordination and to develop collaborative interdepartmental approaches in preparation for the changing and growing elderly population. The Task Force is comprised of representatives from the Department of Education, Department of Veterans Affairs, Department of Labor, Department of Housing and Urban Development, Department of Transportation, Department of Agriculture, Social Security Administration, Health Care Financing Administration, National Institute on Aging, Family Support Administration, Health Resources and Services Administration, and the Food and Drug Administration. The Task Force established four work groups, Housing, Employment/Volunteers, Health, and In-home and Community-Based Care Services. The work groups have convened meetings to identify and select issues of major concern in the designated subject area, prioritize issues, develop action plans and report recommendations to the Task Force.

Housing

Coordination of services to those persons living in Federally assisted housing is of growing importance as residents "age in place." On August 10, AoA signed a Memorandum of Understanding (MOU) with the Farmers Home Administration (FmHA) of the Department of Agriculture. The focus of the MOU is to promote the well-being of older persons by providing a coordinated, integrated response to the housing and supportive service needs of older persons, particularly those programs serving the rural and low-income elderly. Specific activities will be developed for implementation during FY 1991.

AoA is in the final stages of negotiating with HUD for the development of an Interagency Agreement. The goal of the proposed agreement is to increase the capacity of managers of Federally-assisted housing to more effectively serve the frail elderly residents through the provision of supportive services which will enable these residents to continue to live independently.

Additionally, AoA's regional offices in Boston and Atlanta each convened a major conference with HUD and FmHA where the issues of housing for the elderly, aging in place and supportive services were addressed. All three agencies felt that these conferences were timely and successful.

Another problem which is becoming more prevalent among older persons is homelessness. AoA worked with the Interagency Council on the Homeless concerning State and local programs for elderly homeless persons. Some of the State and Area Agencies on Aging have developed special projects to reach homeless elderly persons through the provision of case management and nutrition services in the skid row areas and have worked with local and city governments to find shelter for homeless elderly persons.

The Title IV Research and Demonstration Program of AoA is one mechanism which we use to provide useful information and materials to the field. In the housing area, ten demonstration grants were awarded under priority area 5.1, "Supportive Services for the Elderly in Federally Assisted Housing." These projects will be explained further under Title IV-B Research and Demonstration Projects of the Annual Report.

Employment

During FY 1990, AoA signed a MOU with the Employment and Training Administration (ETA) to facilitate cooperation between the two agencies and to assist States and local communities in improving linkages between human service programs, and to achieve an integrated response to increasing employment and training opportunities for older persons. The MOU will develop initiatives to support the following objectives: (1) To encourage cooperation and collaboration between the service delivery systems supported by ETA and AoA in providing training, retraining, and employment services for older workers; (2) To encourage employers to hire, train, and retain older workers; (3) To reduce institutional barriers which limit opportunities for older workers to remain in or reenter the workforce; (4) To promote research, demonstration, and training activities and the dissemination of information that foster improved employment opportunities for older persons.

Representatives of ETA and AoA have met to discuss collaborative activities to support MOU. The two agencies have exchanged program information for dissemination to respective networks.

Volunteers: AoA/ACTION Collaboration

The Older Americans Act encourages collaborative efforts between the Administration on Aging and the ACTION agency in the development and expansion of volunteer opportunities for older persons through innovative program activities and initiatives. An Interagency Agreement with ACTION was signed on September 10 to sponsor a jointly funded, three-year program effort to demonstrate innovative approaches to gain private sector support to expand the number of Senior Companions providing in-home services to homebound vulnerable older persons. This expansion of the Senior Companion Program will provide new opportunities for older persons to engage in meaningful and useful volunteer activities. Eleven grants to State Agencies on Aging were funded in collaboration with appropriate Area Agencies on Aging and Senior Companion Programs. The State Agencies on Aging which received a grant designated existing Senior Companion projects as demonstration sites. ACTION also awarded a three-year contract for the conduct of a joint AoA/ACTION evaluation of the demonstrations to expand the Senior Companion Program.

Transportation

On June 11, 1990, the AoA signed a new Memorandum of Understanding with the Urban Mass Transportation Administration. The objectives of the agreement are (1) To improve the coordination of transportation services funded under the Urban Mass Transportation Act of 1964, as amended, and the Older Americans Act of 1965, as amended, which relate to older persons, including the low-income, minority, disabled, rural, and other "hard to reach" elderly; (2) To promote coordination of funding sources at the State and local levels between the network on aging and the transportation network and to encourage both networks to collaborate with agencies and community leaders in order to promote the development of responsive transportation systems; (3) To identify and explore ways to remove Federal barriers to coordination of transportation services to older persons, with particular attention to the low-income, minority, disabled, rural, and other "hard to reach" elderly; (4) To facilitate the development of information sharing activities at the national, regional, and State levels among all parties involved in elderly and handicapped transportation, particularly, information on mechanisms for utilizing the private sector; (5) To promote the development of volunteer rural transportation service systems; (6) To develop research, demonstration, training, technical assistance, and dissemination activities to promote the effective provision of transportation services for older persons. In addition, AoA and

UMTA will also explore linkages with other organizations administering programs which impact on transportation services for the elderly and ways to meet the transportation service needs of frail elderly Indians residing in non-reservation areas in order to provide access to needed nutrition and health care services.

Fire Safety

A fire in the home still remains as one of the greatest fears of an older person. During FY 1990, AoA undertook several initiatives in the area of fire safety. AoA participated in a national fire safety teleconference in April sponsored by the Federal Emergency Management Agency (FEMA), Emergency Education Network (EENET). The program centered around the "Let's Retire Fire: A Fire Safety Program" with discussions on senior citizen fire problems, reaching and teaching older Americans, public fire education and fire safety materials. Also, discussions took place with the Consumer Product Safety Commission on the fire safety issues related to elderly nightware. As a result, a one page flyer addressing prevention tips for senior citizens has been developed. This flyer will be ready for distribution in FY 1991 along with a technical assistance package on fire safety for the Aging Network, and this technical assistance package will be ready for distribution in FY 1991.

Additionally, AoA entered into the second year of the Interagency Agreement between the Administration on Aging and the National Institute for Standards and Technology-Fire Safety in Board and Care Homes. The objective of this agreement is to assure a high level of fire safety in board and care homes and to decrease the cost of achieving such safety. Under this agreement, AoA is participating jointly with the Department of Education, ADD, HCFA, and others, in the funding of a two-year project to evaluate the fire safety evaluation system in board and care homes and to foster the use of Chapter 21 of the Life Safety Code. The objective of the project is to determine the scope of the current use and the degree to which Chapter 21 is achieving the desired goals. The project will provide information regarding whether or not the use of the Chapter 21 model requirements provides a high level of safety at reasonable cost. Currently under review within AoA is a draft report on the incidence of fire-related deaths and injuries in board and care homes.

National Survey on Recreation and the Environment

AoA has been part of a Work Group with the U.S. Department of Commerce, National Oceanic and Atmospheric Administration and the U.S. Department of Agriculture, Forest Service. The goals of the Work Group are to establish benchmark data to help policy makers and decision-makers understand recreational use of public attitudes toward our national natural resources. A portion of the survey will replicate previous National Recreation Surveys, enabling scientists to identify recreation trends over a 30 year period dating back to 1960. Currently, the National Survey on Recreation and the Environment (NSRE) is soliciting sponsors for this nationwide research effort. Administration of the questionnaires is planned for early 1992 and continue through Spring of 1993. Reporting of the results will be completed in 1994.

Developmental Disabilities

In support of the Memorandum of Understanding between the Administration on Aging (AoA) and the Administration on Developmental Disabilities (ADD), AoA and ADD cosponsored an international meeting on research and practices in the area of aging and developmental disabilities. This meeting was held in conjunction with the November 1990 Annual Meeting of the Gerontological Society of America. Other cosponsors of the meeting were the American Association of Mental Retardation, the Association for Gerontology in Higher Education and the Joseph P. Kennedy, Jr. Foundation. Objectives of the meeting were to synthesize the current practice and identify areas of inquiry and program development. Meeting participants included representatives from the United States, Canada, Europe, Australia, and Hong Kong.

Also, AoA and ADD jointly funded grants under priority areas which were included in the AoA and HDS FY 1990 Discretionary Program Announcements. Grants funded are intended to improve linkages between the aging and disabilities networks at the regional, State, and local levels, and to support training initiatives in the areas of early intervention, programs to serve older persons with developmental disabilities, and community-based programs.

Collaboration with Social Security and Health Care Financing Administrations

During FY 1990, AoA, SSA, and HCFA signed a Memorandum of Understanding (MOU) to promote enhanced collaboration of aging services. AoA, SSA, and HCFA have worked together to develop initiatives to support the following objectives - (1) to improve coordination of services funded under the program authorities of AoA, SSA, and HCFA which relate to older persons; (2) to increase public awareness of SSA and HCFA entitlement, the nutrition and supportive services programs of AoA, and other programs which promote the well-being of older persons; (3) to increase participation in SSA and HCFA entitlement programs, nutrition and supportive services programs of AoA, and other programs which promote the well-being of older persons through special outreach efforts which focus on "hard to reach" individuals such as low-income minorities, non-English speaking and rural older persons; (4) to reduce dependency on entitlement programs by improving personal financial security and increasing employment opportunities for older persons, particularly those with disabilities; (5) to improve health care for vulnerable older people.

Several activities were undertaken during FY 1990 in support of this MOU. In the interest of improving the coordination of services for older persons, AoA and SSA jointly conducted a pilot project involving SSA Field Offices and Area Agencies on Aging. The Older Americans Service Coordination Pilot involved regularly stationing volunteers or paid Area Agency on Aging staff in SSA Field offices several times a week. The pilot was conducted for 90 days during the summer of 1990 in the following cities, Boston, MA, New York, NY, Philadelphia, PA, Atlanta, GA, Chicago, IL, Dallas, TX, Kansas City, MO, Denver, CO, Seattle, WA, Los Angeles, CA, Cookeville, TN, and Washington, DC.

In addition, the Commissioner on Aging, the Commissioner of Social Security, and the Administrator of the Health Care Financing Administration participated in a joint discussion via the SSA Satellite Teletraining Network. The program was seen in 29 sites throughout the country and representatives from all three networks were invited to attend. Throughout FY 1990, AoA forwarded Information Memoranda to States and Area Agencies on Aging to provide them with information concerning the Memorandum of Understanding and initiatives being conducted to support objectives.

AoA and HCFA assisted SSA in the implementation of a Representative Payee project. The project objective is to increase the number of individuals and/or organizations willing to serve as volunteer representative payees for Social Security and Supplemental Security Income beneficiaries who need assistance in managing their benefit payments. AoA, SSA, and HCFA are also involved in an information exchange to keep each agency abreast of relevant changes and developments impacting older persons.

AoA, SSA, and HCFA developed and published a pamphlet that includes information about eligibility requirements for participation in Older Americans Act, Social Security, SSI, Medicaid and Medicare programs. This pamphlet will be disseminated to agencies within networks of AoA, SSA, and HCFA.

Hospital Emergency Room - Community Aging Service System Linkages

During the Fiscal Year, work was completed by the last of six (6) demonstration projects funded by AoA in FY 1987 which developed formal linkages between hospital and aging community service agencies to facilitate the safe return home of frail elderly medically discharged from an emergency room. The projects used a variety of structural and procedural alternatives to identify, screen, and refer older emergency room patients who would otherwise be at risk in performing self-care management activities at home following emergency room discharge. To overcome the structural barriers of hospital emergency rooms - facilities designed to meet urgent medical emergencies and not the complex psycho-social and chronic physiological needs of many older persons - projects trained para-professionals and placed volunteers in emergency rooms to assist hospital social workers in interviewing older patients to determine the adequacy of self-support if discharged. A number of projects developed short-term case management and personal care services for discharged persons until they could care for themselves or other longer-term supports were arranged.

The projects successfully demonstrated that previously undiscovered frail elderly could be reached by social service agencies through formal linkages to hospital emergency rooms and that such interventions could decrease repeated or inappropriate use of emergency rooms as substitutes for the family physician. They also determined, that without additional resources to maintain these linkages, they could not be sustained. Even with additional resources, persistent problems exist in the availability and response time of in-home services to meet the immediate needs of a discharged emergency room older person. The results and lessons from these demonstrations have been disseminated through reports developed by AoA and the Long-Term Care National Resource Center at the Universities of California-Los Angeles and Southern California, and publicized in a feature article to be published in the Winter 1990-91 issue of Aging magazine.

Commissioner's Meeting on Long Term Care

In April 1990, the U.S. Commissioner on Aging convened a meeting of fifty aging network executives and others from across the country to discuss: 1) current and emerging issues facing State and Area Agencies as they work to foster community based long term care, and 2) alternative approaches to addressing these issues within existing resources.

Constance Horner, Under Secretary of the U.S. Department of Health and Human Services (HHS) and Chair of the HHS Task Force on Long-Term Care and the Uninsured, provided the keynote speech in which she recognized the aging network's contributions to serving the vulnerable elderly. The Under Secretary urged the network to continue to strengthen its efforts to meet the long-term care needs of older persons while the national debate on long term care takes place.

Four broad issues were identified by the conference planners as the central focus of the meeting: (1) Access to services; (2) Consumer decision-making and protection; (3) Managing and coordinating multiple State and local programs and funding streams; and, (4) Opportunities for public and private sector collaboration. In addition, participants were asked to identify ways that the Administration on Aging could assist the aging network improve service delivery and contribute to the national long term care policy debate.

A report of the meeting, "Advances in Long Term Care" was prepared by the Brandeis University National Long Term Care Resource Center and disseminated by AoA to the aging network. This report is intended to provide a sense of the issues and approaches discussed at the meeting as well as to stimulate new thinking about system development efforts that can be undertaken at the State and local levels.

National Health Promotion: Special Initiatives and Interagency Activities

The National Health Promotion Initiative for Older Persons is a joint activity sponsored by the Administration on Aging and the Public Health Service. This multi-year activity was officially launched in 1984 with the signing of the first of several Memoranda of Understanding between the two agencies. The Initiative is designed to improve the health status of older persons and improve the quality of life of their later years.

The Initiative has three major goals: (1) maximizing the opportunities for older persons to live independently through improvement of their health status; (2) focusing attention on health promotion and disease prevention through improved nutrition; physical fitness; smoking cessation; mental health; dental health; adult immunization; prevention of fire and smoke related accidents and injuries; driver and pedestrian safety; depression; diabetes; and hearing impairments; and (3) curtailing health expenditures caused by preventable conditions. Some specific activities conducted during FY 1990 to attain these goals are discussed below.

Smoking Cessation

The Administration on Aging, in conjunction with the Office of Smoking and Health, the Office of Disease Prevention, and the American Association of Retired Persons, launched an initiative to encourage older persons that "It's Never Too Late to Quit Smoking." The initiative, which is a follow-up to the recommendations of the 1988 Surgeon General's Workshop on Health Promotion and Aging, and the 1990 Surgeon General's Report on Smoking and Health, includes a public education and awareness campaign on the possibilities for stopping smoking at any age and will encourage older persons and their families and caregivers to seek the necessary resources to assist them in this effort.

Year 2000 Objectives

The Administration on Aging has been involved with the preparation of the Year 2000 Health Objectives for the Nation since 1988. AoA participated in the original Task Force organized by the National Institute on Aging, which had the overall responsibility for helping to develop the Objectives for older persons. AoA also reviewed, commented and made suggestions on the various drafts of the document, which was finally prepared and issued by the Office of Disease Prevention and Health Promotion, PHS, in September 1990.

Other Health Promotion Activities

The Administration on Aging supported the development and distribution of the fifth annual Health Promotion Calendar for Older Persons. Owing to the success of the prior calendars, the 1990 calendar was a joint effort between AoA, the National Council on the Aging and a private sector sponsor for the second year in a row.

The Administration on Aging again collaborated with the National Osteoporosis Foundation to produce a poster and materials in support of National Osteoporosis Month. This activity is designed to raise national awareness of the prevalence of this disease among older persons and the possibilities which exist for prevention through modification of lifestyles. Secretary Louis Sullivan, M.D. was the keynote speaker at the annual awards banquet given by the Foundation and Dr. Joyce Berry, U.S. Commissioner on Aging, received an award for the Agency's long-standing commitment to osteoporosis education.

Health Promotion Among Minorities

The ten projects which were awarded under the FY 1989 Historically Black Colleges and Universities Initiative (HBCU) began to develop and carry out their projects. The initiative is designed to increase the awareness and motivate older minority persons to the importance of healthy behaviors and lifestyles. Each school is developing and demonstrating strategies that will ultimately promote better self-care habits among Black elderly. These strategies range from using a

mobile van for health screening, health education and health counseling in rural areas; developing church-based health promotion programs; to developing six (6) videotapes and instructional guides to be broadcast on public access television. The National Resource Center on Health Promotion and Aging prepared a brochure which describes each of the individual HBCU projects.

Information and Referral

In addition to its Federal level advocacy responsibilities, AoA is also charged with assisting and supporting efforts by other components of the national network on aging to serve as effective advocates at the State level and in communities across the country. Information and referral remains a key element in AoA's strategy for enhancing the network's advocacy capability and remains the cornerstone of a comprehensive service delivery system. In an effort to strengthen the capacity of the network on aging in this area, the Administration on Aging has several efforts related to Information and Referral underway. (1) the National Association of Area Agencies on Aging, under a cooperative agreement from AoA, is pilot testing an 800 toll free Information and Referral number in select geographic areas. If the demonstration proves successful, the toll free I&R number will be expanded to include other geographical areas. (2) the National Association of State Units on Aging was awarded a grant to enhance the capacity of State Aging Information and Referral systems to meet the future needs of an aging society. (3) The Administration on Aging is working in collaboration with the General Accounting Office (GAO) to identify exemplary local I&R systems; (4) AoA also worked with the Subcommittee to the HHS Working Group on Disability to develop recommendations and proposals to improve I&R systems for persons with disabilities; (5) AoA has been in the process of updating and revising the Caregivers Guide, "Where to Turn for Help." This booklet, which continues to receive wide circulation and distribution by public and private organizations, is aimed at providing answers to some of the most frequently asked questions about finances, health, legal and community services for the elderly.

Elder Abuse Initiative and Activities

Secretary Louis Sullivan has assigned AoA and the Assistant Secretary for Planning and Evaluation (ASPE) joint responsibility for developing a DHHS Elder Abuse Strategy, with the cooperation and assistance of other appropriate units in the Department. A DHHS Elder Abuse Task Force (consisting of the top leadership of AoA, ASPE, the Health Care Financing Administration, the Public Health Service, and the Social Security Administration) will develop a detailed plan that recommends for the Secretary's consideration and decision: (1) short term activity that would be carried out within current budget constraints and program authority and; (2) longer term policy, programmatic, and research issues.

Secretary Sullivan has made clear the commitment of the Department to take concerted action against elder abuse in both institutional and residential (home) settings. The DHHS strategy now being developed will encompass efforts to: (a) promote the prevention of elder abuse whenever and wherever possible; (b) improve the reporting, investigation, and resolution of elder abuse cases through appropriate intervention services, and; (c) point toward better monitoring and follow-up of those cases to guard against reoccurrences of elder maltreatment.

Among the activities that will be considered for inclusion in the Elder Abuse Strategy are:

- o Public awareness campaigns conducted jointly at national and State levels, keynoted by a national conference.
- o Capacity-building activities to support State systems for reporting, investigation, intervention, and resolution of elder abuse cases.

- o Training programs on how to recognize, prevent, and deal with elder abuse for such care providers and service practitioners as nursing home administrators, nurses aides, physicians, social workers, and senior center staff.
- o Judicial and law enforcement supportive activities to strengthen the roles of the courts, adult protective service agencies, nursing home survey and certification agencies, law enforcement offices, and medicaid fraud and abuse units.
- o Research and demonstration projects to advance our ability to understand and deal with elder abuse, including studies of the causes of maltreatment and testing new models for identifying, preventing, and intervening against elder abuse in both domestic and institutional settings.

Low-Income Minority Elderly

According to the most current census data available, nearly one-fourth of the total number of low-income minority elderly in the United States are concentrated in the southeastern states of Georgia, Florida, North Carolina, South Carolina, and Alabama. Nation-wide, the largest numbers of low-income minority elders live in Texas, New York, Florida, California, and Georgia. The smallest populations of low-income minority older persons reside in Vermont, New Hampshire, Maine, North Dakota, and Wyoming.

The 1987 Amendments to the Older Americans Act (OAA) required State and Area Agencies to place an increased emphasis on meeting the needs of low-income minority elderly persons. In Section 306(a) (5) (A) of the OAA, Area Plans are required to:

1. Provide assurances that preference will be given to providing services to older individuals with the greatest economic or social needs, with particular attention to low-income minority individuals;
2. Provide assurances that the Area Agency will include in agreements made with service providers a requirement that the provider will: a) specify how he/she intends to satisfy the service needs of low-income minority elders in the area served by the provider, and b) attempt to provide services to low-income minorities in at least the same proportion as they bear to the population of older individuals in the service area;
3. Identify the number of low-income minority older individuals in the planning and service area; and
4. Describe the methods used to satisfy the service needs of such minority elders.

States use a wide variety of methods to satisfy the service needs of their low-income minority individuals, including training and information dissemination, in English and other languages if needed; altering intrastate funding formulas to reach more low-income minority elders; as well as forming task forces, working with national minority organizations, and increasing minority participation on advisory councils and in the provision of services.

The Administration on Aging (AoA) has a major policy goal to develop and implement new strategies to more effectively target resources and programs on the needs of the most vulnerable older persons, with special emphasis on low-income minority elderly. We are confident that all segments of the national network of services for the elderly share our conviction that substantial improvement on this mandate can and must be achieved as a priority.

During the past fiscal year, AoA has demonstrated its commitment to targeting services to low-income minority elders through the issuance of the Policy Instructions to States, encouraging their development of programs to target services to these most vulnerable older persons. Plans are underway to establish a Commissioner's Council on Minority Participation during the current fiscal year. This Council of experts from the field of aging will focus on minority participation under the Older Americans Act and will help to ensure that the best possible policies and practices are instituted on behalf of all older persons.

Hispanic Aging Initiative

The AoA Hispanic Aging Initiative is focused on collaborative efforts among Federal, State, and community agencies, national Hispanic/aging organizations, and knowledgeable and concerned individuals--efforts aimed at improving the quality of life of Hispanic elderly. The initiative's primary focus is on public information and related efforts that better inform Hispanic elderly on how to improve their health. A related objective is to better target resources to Hispanic elderly and to increase their access to services and entitlement programs. Complementary aims are to increase the number of trained Hispanics serving in aging programs and to improve our knowledge and understanding of the Hispanic aging population.

Health Promotion and Disease Prevention

Under the objective of health promotion and disease prevention, AoA has planned or underway a range of collaborative activities with the National Institute on Aging (NIA) and others to conduct workshops and public education campaigns adapted to the cultural norms of Hispanic elderly. The AoA/NIA workshops, scheduled for December 1990 and February 1991, will develop health promotion strategies and recommendations for future research on the health practices of Hispanic elderly. Initial public education campaigns are likely to focus on 1) nutrition, 2) physical fitness, and 3) smoking cessation--important health concerns in the Hispanic community.

Other health promotion activities under the AoA Hispanic Aging Initiative include project awards to the two national Hispanic aging organizations, the Asociacion Nacional Pro Personas Mayores (ANPPM) and the National Hispanic Council on Aging (NHCoA) to develop health promotion materials and program activities for Hispanic elderly. These include brochures in Spanish on smoking cessation, diet, exercise and hypertension; television spots in Spanish on smoking cessation and healthy diet; and health promotion and disease prevention projects on cardiovascular disease and stroke, diabetes, and accidental injuries.

In addition, AoA has recently funded the Aging Assist/WQED (Metro Pittsburgh Public Broadcasting) project which will develop a six part public television series on health promotion for Spanish speaking elderly and the hearing impaired elderly. This new television series builds on an earlier AoA-funded WQED production, which also had a health promotion focus, that was designed for a general, English speaking audience.

Targetting of Services to Low Income Hispanic Elderly

AoA currently is funding a number of projects to improve access to services by Hispanic elderly. In addition to their health promotion activities, both the ANPPM and the NHCoA received two year grants to educate Hispanic elderly about their entitlement benefits. The National Council of La Raza continues a project to establish a national network of Hispanic community-based groups committed to serving the elderly. Other projects focus on access to legal services, home care services and health services, and diabetic retinopathy. Model programs and other materials developed by the National Resource Center on Minority Aging Populations will be available to improve programs serving the Hispanic elderly.

Training to Improve Services to Hispanic Elderly and Better Knowledge and Understanding of the Hispanic Aging Population

Several current Title IV-A Training projects include components to improve the skills and capacity of professionals and/or paraprofessionals to serve Hispanic elderly. Both ANPPM and NHCoA are funded to place Hispanic graduates/professionals in paid, aging-related, administrative-level traineeships. The Pasadena Hospital Association and the Edward R. Roybal Center on Applied Gerontology, in conjunction with a consortium of ten (10) local home care agencies, will train Hispanic workers to deliver home care services to the elderly. In addition, the Institute for Community Research (Hartford, Connecticut) will be developing a model information and communication program aimed at improving access to services by Hispanic elderly with Alzheimer's Disease and by their family caregivers.

USA/USSR Cooperative Activity on The Elderly

With the assistance of the Administration on Aging (AoA) and other organizations in the field of aging, the Department of State developed a comprehensive program of cooperative activities between the USA and the USSR on programs and services for the elderly. This comprehensive program involves the exchange of information concerning issues related to older persons in America and the Soviet Union, including health care, housing, social services, income security, employment, and long-term care.

The collaborative activities included a visit to America by a Soviet Delegation of six persons to participate in a comprehensive program on the elderly during April and May 1990. The National Council on Aging Conference, an Administration on Aging Overview of USA System of Programs and Services for Older Americans, and site visits to State and Area Agencies on Aging, Hospitals with Geriatric Care Units, Nursing Homes, and Housing Communities for Senior Citizens in the Baltimore and Washington Metropolitan Area were included among the planned activities for the delegation.

The Administration on Aging continues to meet regularly with the State Department, Bureau of Human Rights and Humanitarian Affairs to discuss the Soviet Union requests for assistance. One of the areas of requested assistance was in the construction and renovation of homes for the elderly. The Administration on Aging as a member of the State Department's work group contributed to a technical assistance housing proposal which was presented in Russia October 1-7, 1990.

SECTION II - TITLE III SUPPORTIVE AND NUTRITION SERVICES

Introduction

The Administration on Aging (AoA) is the lead component within the Department of Health and Human Services on all issues concerning aging. It advocates for the needs of the elderly in program planning and policy development; provides technical assistance; issues best practices guidelines; and initiates policy relative to funding the States and Territories for the provision of services to older Americans under Title III (Grants for State and Community Programs on Aging.)

Each State Agency is required to subdivide the State into Planning and Service Areas (PSAs) and to designate within each PSA an Area Agency on Aging (AAA) to be specifically responsible for carrying out the purposes of the Act within the PSA. While most States have a statewide network of Area Agencies on Aging, fourteen States/Territories have designated their entire geographic area as a single PSA with the State agency performing the Area Agency functions because of their small geographic areas or population size.

State Agencies on Aging

The Older Americans Act intends that the State Agency on Aging shall be the leader relative to all aging issues on behalf of all older persons in the State. This means that the State Agency proactively carries out a wide range of functions related to advocacy, planning, coordination, interagency linkages, information sharing, brokering, monitoring and evaluation designed to develop or enhance services for older persons throughout the State. Fifty-seven (57) States and other jurisdictions receive support under Title III of the Act. States may elect durations of two, three or four years for State and Area Plans.

The State Agencies assure that the resources made available to Area Agencies on Aging under the Older Americans Act are used to carry out the Area Agency mission of assisting older persons in leading independent, meaningful and dignified lives in their own homes and communities as long as possible.

State and Area Agencies on Aging work to facilitate the most effective use of all community resources, both public and private, to provide for appropriate services to older persons within the many communities of the Planning and Service Area. To effectively accomplish this goal, there must be a community-wide effort with all appropriate resources, programs and personnel carefully coordinated.

Area Agencies on Aging

In FY 1989, there were over 670 Area Agencies on Aging operating under Title III of the Act. As of the end of FY 1989, there were approximately 684 Planning and Service Areas, including the 15 Single Planning and Service Areas, previously mentioned, covering whole States and Territories. An Area Agency on Aging may be a public or private organization, an Indian Tribe or a sub-State regional body. Area Agencies on Aging have the major responsibility for the administration, at the sub-state level, of Title III funds for supportive and nutrition services. Area Agencies receive their funds from the State Agency on Aging and then award grants and contracts to local supportive and nutrition service providers under an approved area plan.

Area Agencies on Aging are responsible for providing technical assistance to and monitoring the effectiveness and efficiency of, their respective service providers. Through their coordination and planning activities, Area Agencies also address the concerns of older persons at the community level. Area Agencies interact with other local public and private agencies and organizations in order to coordinate their respective activities and elicit or "leverage" additional resources to be used on behalf of older persons.

Funding State and Area Agencies on Aging

State Agencies on Aging received a total of \$709.5 million of Title III funds during FY 1990. Funds under this Title of the Act are made available to the States on a formula basis upon approval of State Plans by AoA Regional Offices. States then allocate funds to Area Agencies based upon approved Area Plans to pay up to 85 percent of the costs of supportive services and senior centers, and nutrition services. In most cases, Area Agencies on Aging then arrange with both nonprofit and proprietary service providers to deliver nutrition and other services described in the Area Plan.

In general, funds provided to Area Agencies are used for the administration and provision of a wide range of supportive and nutrition services authorized under Parts B, C and D of Title III as described in the next paragraph.

Title III Services

Title III activities conducted in the States during FY 1990 were based upon State plans ranging in duration from two to four years. In FY 1990 four separate allocations under Title III were made to States for: (a) supportive services; and senior center operations; (b) congregate nutrition services; (c) home-delivered meals; and (d) in-home services for the frail elderly. The 1987 Amendments to the Older Americans Act newly established Part D to Title III for in-home services for the frail elderly. (See Appendix II for State allotments under Title III in FY 1990).

Title III-B supportive services are designed to provide assistance to all older persons, with particular attention to older persons in greatest economic or social need. Most supportive services fall in three broad categories: access services; in-home services; and other community and neighborhood services. Access services are transportation; outreach; and information and referral. Most in-home services are homemaker; personal care; chore; and/or visiting and telephone reassurance. Community and neighborhood services include legal services; residential repair; escort services; health services; physical fitness programs; pre-retirement and second career counseling; and other services.

Data on Title III services and program operations are reflected in State Program Reports which are sent to AoA Central Office each year by the State Agencies on Aging through AoA's ten Regional Offices. The Title III State Program Reports for FY 1989 were analyzed during FY 1990. The national program statistics for FY 1989 are provided in Appendix IV. These data pertain to: participation levels for Title III-B supportive services; service characteristics and participation under Title III-C nutrition programs; and Title III-D in-home services for frail older persons. Selected program data are presented in the following paragraphs.

The 1987 Amendments to the Older Americans Act require the Administration on Aging to report to Congress specific information regarding the programs and activities under the Act at the end of the fiscal year. The information collected by the States in FY 1990, to be reported as called for by Sections 207 (a)(1), (a)(2) and (a)(4) is currently being analyzed and will be included in the Annual Report for FY 1991.

Title III-B Supportive Services

In FY 1989, the Title III-B program reached an estimated 7.1 million older clients in need of access, in-home, and community-based services. In FY 1989, 15 percent of all participants were racial and ethnic minorities and 40 percent were low income. In the area of access services, transportation was the most frequently provided service, followed by information and referral, then outreach. In the area of in-home services, housekeeping assistance was reported most frequently followed by reassurance to elderly persons through visiting and telephone contacts, and then chore services. In the community-based services area, recreational services were most frequently provided, followed by education and training, escort and legal services.

Title III-C. Congregate and Home Delivered Nutrition Services

Congregate and Home-Delivered Nutrition Services, authorized by Title III-C, continue to be an integral part of the systems which communities are developing to assist their older citizens in maintaining independence and remaining in their own homes as long as possible.

Congregate Nutrition Services

Over 144 million congregate meals were served to older people and their spouses during FY 1989. In addition to Title III-C funds, these meals are also supplemented and supported by United States Department of Agriculture funds; Social Services Block Grant program funds; other Federal, State/local funds; and participant contributions. Over 2.7 million elderly received meals at congregate sites.

Home-Delivered Meals

Home-delivered meals are also critical to the maintenance of independence for older persons who are unable to participate in congregate meals programs. During FY 1989, 99.6 million meals were provided to the homebound elderly from Title III-C and other funding sources. This number represents an increase over the 94.6 million home-delivered meals served in FY 1988. A total of 775,159 older persons received home-delivered meals.

Title III-D. In-Home Services for Frail Elderly

Title III-D, In-Home Services for Frail Older Persons, was established by the 1987 Amendments to the Older Americans Act, and funds became available for the first time in FY 1988. During FY 1989, over 91,000 thousand frail older persons received in-home services under the Title III-D program.

Advocacy and Partnerships

In advocating for older persons, State and Area Agencies on Aging review and comment on State and community policies, programs and issues; provide testimony at public hearings; publish reports; coordinate and provide technical assistance to other public and private agencies and organizations; and leverage resources from other Federal, State and local programs, as well as private charitable and business resources.

Non-Federal Resources and Program Income

The Title III program has evolved from a relatively simple program of community service projects for older persons into a complex and highly differentiated "national network on aging" currently consisting of 57 State Agencies and over 670 Area Agencies on Aging and more than 25,000 local nutrition and supportive service providers. These nutrition and supportive service providers are local public, private, or voluntary organizations. Not only do the State and Area Agencies on Aging use Title III monies to provide for services, they also are instrumental in leveraging other public and private monies in addressing the needs of older persons.

Title III regulations (45 C.F.R. Part 1321) require each service provider to "provide each older person [receiving services] with a full and free opportunity to contribute toward the cost of the service." Although AoA emphasizes through the aging network that this is not a fee and that contributions are entirely voluntary, these contributions have been steadily increasing, as follows:

FY 1981	\$ 79.0 million
FY 1982	100.8 million
FY 1983	116.7 million
FY 1984	131.7 million
FY 1985	140.1 million
FY 1986	153.9 million
FY 1987	163.6 million
FY 1988	168.1 million
FY 1989	179.0 million
FY 1990	

Ombudsman Programs

State Agencies use part of their Title III-B (Supportive Services and Senior Centers) funds and funds from other sources to establish and maintain long term care ombudsman programs at the State and sub-State levels. Through their ombudsman programs, States have addressed such issues as nursing home regulations, abuse of residents' personal funds, and restrictions on access to nursing homes. Complaint statistics and program data for the FY 1989 reporting period were analyzed during FY 1990. Some highlights of these data are as follows:

- o During FY 1989, the most recent period for which data are available, there were 1367 sub-state programs.
- o Total funding for State and local ombudsman programs in FY 1989 increased from approximately \$23.3 million in FY 1988 to about \$25.2 million. In addition to Title III-B funds, State and local governments used funds from other sources, including State, county, and local revenues, grants under Titles IV and V of the Older Americans Act, and other funding sources.

Waivers as Related to Priority Services

The Older Americans Act, as amended, requires that the Administration on Aging collect and report special information about access, in-home and legal assistance services. Section 307 (a) (22) requires that each State Agency include in its State Plan a minimum percentage of Title III-B funds which each Area Agency must expend on these services. Otherwise, the State grants a waiver to the Area Agency. Section 306 (a) (2) describes the requirements which must be met by an Area Agency when requesting a waiver from providing the required minimum amount for one or more of these priority services (access, in-home and legal assistance) and by the State Agency in granting any such waiver request.

Pursuant to Sections 207 (a) (2) and 306 (b) (2) (d) of the Act, the Administration on Aging compiled a report on waivers of priority services as required under the Act. The following provides a brief overview of the report:

The Act permits State Agencies to grant waivers to Area Agencies that have not expended the mandated minimums for priority services. The Act also requires the State Agency to follow rigorous procedures in their respective granting and review of waivers. Of the 674 Area Agencies on Aging in the country, a total of 28 waivers were granted by 8 States. All of the waivers were found to be complete. Of the 28 waivers granted by the States, one was for access, 17 were for in-home services and ten were for legal assistance.

The data suggest that there is a high level of compliance with the provisions of the Act. The States have set minimum expenditure levels for the priority services. For most Area Agencies on Aging the States report that the actual expenditure levels have been met.

It is clear that the States have taken the Congressional mandate seriously as well as the freedom to define appropriate proportion.

SECTION III - SERVICES TO OLDER NATIVE AMERICANS

TITLE VI GRANTS FOR NATIVE AMERICANS

Under Title VI of the Older Americans Act, the Administration on Aging annually awards grants to provide supportive and nutritional services for older Native Americans. When Title VI was added to the Older Americans Act in 1978, it was named "Grants to Indian Tribes." In the Older Americans Act Amendments of 1987 (P.L. 100-175, signed November 29, 1987) it was renamed "Grants for Native Americans," and a change was made to add older Native Hawaiians to the American Indians and Alaskan Natives already being served by Title VI. Title VI was divided into two parts, Part A - Indian Program, and Part B - Native Hawaiian Program. The first grant under Part B was made in Fiscal Year 1989.

In Fiscal Year 1990, under Title VI Part A, for American Indians and Alaskan Natives, there was an increase of 12 tribal organization grantees, from 181 to 193, and the funding increased from \$9,345,000 for Fiscal Year 1989 to \$11,107,961 for Fiscal Year 1990.

Under Title VI Part B, for Native Hawaiians, the funds awarded, as specified by the 1987 Amendments, increased from \$1,365,000 for Fiscal Year 1989 to \$1,433,000 for Fiscal Year 1990.

ELDERS ELIGIBLE UNDER TITLE VI

Persons eligible for services under Title VI Part A are tribal members age 60 or over living in a Tribe's Title VI service area, and members under age 60 if the Tribe has selected a younger age for "older Indian." The Older Americans Act Amendments of 1981 allowed Tribes to set a younger age for "older Indian", if considered appropriate. The 193 grantees of Title VI Part A for Fiscal Year 1990 estimated that 74,607 older Indians were eligible for services, including 59,792 age 60 or over, and 14,815 under age 60.

(See Appendix V for number over and under age 60 for each Tribe, and the age of "older Indian" selected.)

For services under Title VI Part B, the Native Hawaiians must be age 60 or over. Alu Like, the statewide grantee, estimated that 1,300 older Native Hawaiians were in the proposed Title VI Part B service areas on the five major islands and thus were eligible for Title VI services. The grantee estimated that there were a total of 10,876 older Native Hawaiians in the entire State of Hawaii.

SERVICES UNDER TITLE VI

The services provided by Indian Tribes under Title VI Part A were congregate and home-delivered meals, and a variety of supportive services. All grantees provided, unless other arrangements existed, the required service of information and referral. Other supportive services were provided as needed, including transportation, counseling, home assistance services, etc.

We estimate that approximately 1,700,000 meals were provided under Title VI Part A in Fiscal Year 1990, including 900,000 congregate meals, and 800,000 home-delivered meals.

Services under Title VI Part B, Native Hawaiian Program, included congregate meals, transportation, health awareness and screening, education and recreation classes, and escort services. Service centers, located on or near the Hawaiian Home Lands, were developed in Fiscal Year 1990.

CONTRIBUTION TO AoA GOALS

The Title VI program contributed to all eight of the AoA goals established for Fiscal Year 1990.

1. Public-Private Partnerships

AoA encouraged tribal organizations to seek services for older Indians from public, voluntary, and profit-making agencies, as Indians are eligible for all services available in the States, as well as the services available to them because of their status as Indians or as members of Indian Tribes.

By the end of Fiscal Year 1990, AoA had established a working relationship with the American Association of Retired Persons, a voluntary agency, on helping older Indians to obtain benefits to which they are entitled under Medicaid, Medicare, Social Security Retirement, and Supplemental Security Income.

2. Older Persons as a Resource

The Title VI Part A program regularly uses older persons, both Indian and non-Indian, as resources in the service program. Activities include assistance with meals, transportation, information and referral, chore service, etc., as well as membership on advisory committees.

3. Strengthening the Family and Generational Bonding

Title VI programs often encourage intergenerational contacts. Older Indians visit children's groups and tell stories about tribal tradition and culture.

4. Prevention and Alternatives to Institutional Care

One of the main goals of Title VI is to provide, or secure through referral, community-based services which will enable older Indians to remain in their homes. The meals and transportation services, as well as information and referral about available resources, combine to make Title VI a strong influence in the prevention of and alternatives to institutional care.

5. Promotion and Enhancement of Effective Community Based Service Systems

All the programs under Title VI provide community based services to older Indians. Title VI programs also cooperate with Title III services at some Tribes where both are available.

6. Targetting - Strategic Resource Allocation

Title VI is an example of a program which targets its resources on the needs of the most vulnerable older persons, with special emphasis on low-income minority elderly. All Title VI recipients are in a minority group, and American Indians, Alaskan Natives, and Native Hawaiians have been shown to have a high incidence of low income.

7. Manpower Development

There have been several efforts to relieve critical manpower needs in the field of aging. For two years, AoA has utilized the services of an Indian grantee to conduct leadership training sessions for new Title VI program directors. Also AoA funds an ongoing competitive contract to provide technical assistance to Title VI directors. Underlying these special efforts are the continuing technical assistance activities by AoA Regional Office staff.

Some Title VI programs also directly conduct training for persons to care for older persons, by classes in first aid, cardio-pulmonary resuscitation, nutrition and meal preparation, etc.

8. Preparing for the 21st Century - Challenges and Opportunities of an Aging Society

Tribal organizations which are recipients of Title VI have reminded the Federal Government and the public of the growing number of older Indians, and the need to begin planning for those increases now.

ADMINISTRATIVE PROCEDURES

On April 1, 1990, in an effort to reduce the paperwork burden, a change was made in the administration of grants under Title VI. Previously AoA grants had been processed by the Grants and Contracts Management Division of the Office of Human Development Services, using an annual application on Standard Form 424.

Beginning April 1, 1990, Tribes were allowed to provide a narrative plan and the applications were sent to the Regional Offices of AoA. The application period can be for two or three years, without additional application. The Regional Offices review and recommend approval of each plan for the Commissioner on Aging, who gives final approval for the entire period.

TECHNICAL ASSISTANCE

AoA awards an open and competitive technical assistance contract to aid Title VI grantees in matters of program planning and administration. The contract provides group meetings and individual on-site technical assistance. Reports from the contractor show that the grantees request technical assistance primarily on the following subjects: Title VI and Title III coordination; budget and program management; nutrition; and service development.

OFFICE FOR AMERICAN INDIAN, ALASKAN NATIVE, AND NATIVE HAWAIIAN PROGRAMS

On May 19, 1989 the Commissioner on Aging established the Office for American Indian, Alaskan Native, and Native Hawaiian Programs. This new office was charged with the responsibility to serve as the focal point within AoA for the operation and assessment of programs authorized under Title VI of the Older Americans Act (OAA) and to provide program and policy direction to the ten Regional Offices of AoA in the execution of their Title VI responsibilities. Additional functions of the Office are to serve as the effective and visible advocate on behalf of older Native Americans, to coordinate activities with other Federal departments and agencies, to administer and evaluate grants provided under the OAA to Indian Tribes and public and nonprofit private organizations serving Native Hawaiians, and to collect and disseminate information related to the problems of older Native Americans.

INTERAGENCY TASK FORCE ON OLDER INDIANS

The 1987 Amendments in Section 134(d) directed the Commissioner on Aging to establish a permanent Interagency Task Force on Older Indians, with representatives of departments and agencies of the Federal Government with an interest in older Indians. This Task Force was established in Fiscal Year 1990. By the end of the Fiscal Year, representatives of 16 Federal departments and agencies had been appointed, and the first two meetings had been held.

The responsibility of the Task Force, as stated in the 1987 Amendments, is to report to the Commissioner at 6-month intervals on their findings and recommendations with respect to facilitating the coordination of services and the improvement of services to older Indians. The Task Force is to be chaired by the Associate Commissioner on American Indian, Alaskan Native, and Native Hawaiian Aging, who is to be appointed by the Commissioner.

SECTION IV - AOA DISCRETIONARY PROGRAMS

TITLE IV-A: EDUCATION AND DEVELOPMENT PROJECTS

Sections 410 and 411 of the Older Americans Act authorize the award of grants and contracts to assist in recruiting persons, including minorities, to enter the field of aging; to train professional and paraprofessional persons employed in or preparing for employment in fields having an impact on the aging; and to provide technical assistance and other activities related training. Other sections of Title IV authorize health projects and projects in long term care.

Several of the AoA National Goals provide the organizing framework for AoA's education and development initiatives for FY 1990. These goals are:

- o Manpower Development
- o Targeting - Strategic Resource Allocation
- o Promotion and Enhancement of Community Based Service Systems
- o Prevention and Alternatives to Institutional Care
- o Public Private Partnerships
- o Strengthening the Family and Generational Bonding

Highlighted below are new and continuing education and development project activities for FY 1990 under each of these six AoA national goals:

MANPOWER DEVELOPMENT

The primary objectives of the education and training program are to improve the availability and quality of services to older persons and to help meet the critical shortages of adequately trained personnel for programs in the field of aging. Activities supported under this program are intended to encourage and develop State and community leaders dedicated to these objectives and the creation and implementation of responsive community-based systems of services for the elderly. In FY 1990, AoA's new awards focused on a cross section of target groups that will address a variety of training issues and techniques. The following is a brief description of these new activities as well as a summary of major ongoing projects funded in FY 1989.

MANPOWER DEVELOPMENT

A. National Leadership Institute on Aging

The National Leadership Institute on Aging, established in 1988 and located at the University of Colorado at Denver, is designed to enhance the leadership capacities of aging network executives and maximize their abilities to respond to the needs and opportunities of our aging society. During the first year, Institute activities were developmental in nature and included the establishment of a program philosophy and a conceptual framework for the project, as well as the development of curriculum, convening an advisory committee and other design and implementation tasks.

In its second year the Institute had numerous responsibilities to fulfill. These involved implementing four residential leadership development programs that were very successful. These residential seminars, the core of the Institute's program, are intended to assist aging network executives to examine and develop their leadership styles and capabilities and to challenge and inspire them to seek new ways to fulfill their roles as key policymakers in our rapidly expanding aging society. The success of these programs has been well documented and the Institute has achieved national recognition. Over 150 representatives of State Units on Aging, Area Agencies on Aging, national aging organizations, universities, and the private and non-profit sectors, from 48 States and territories, have attended Institute programs.

Other accomplishments over the past year included the refining of the leadership curriculum, the development of a cadre of Institute faculty, and the provision of consultation and technical assistance to the aging network. In addition, a substantive marketing campaign was undertaken to promote the Institute, including presentations at national conferences, news releases, and an article in Aging Network News. Brochures and program announcements were mailed to a wide audience, including all Area Agencies on Aging, Directors of State Unit on Aging and member organizations of the Leadership Council on Aging, as well as representatives of other national organizations.

B. Native American Leadership Institute

In FY 1988 a grant was awarded to Three Feathers Associates to conduct a training program for Title VI Directors. A 10

day intensive Training Institute was convened for 25 participants and received high evaluations. The curriculum included legislative and administrative history of aging services, program planning and implementation, program management and gerontology issues.

During FY 1989, Three Feathers Associates conducted a second leadership training program for 20 participants. In addition to the regular curriculum, a new component was added entitled "Federal Agency Implementation Process and Leadership Skills Development". In addition, participants received practical training in the development of a Program Management Information and Client Tracking System. Follow-up training and technical assistance was also provided.

C. Gerontological Faculty and Program Development

The Administration on Aging has continued to encourage the inclusion of aging content in programs that target professional and paraprofessional service providers, church and civic organizations, and faculty and student bodies in schools of higher education. These groups have significant influence on the lives of older persons and, therefore, benefit from specialized gerontological or geriatric content in their training and career preparation programs.

Ongoing Projects:

Eight grants were awarded in FY 1989 to institutions of higher education for gerontological training and development. These projects focused on key areas including faculty development in gerontology, replication of successful curricula in institutions where gerontology was not taught as extensively, and development of gerontological faculty and programs in minority institutions.

Examples include a project to provide gerontological training to faculty of 25 American Indian colleges; replication of successful gerontological social work curriculum in seven institutions in Hawaii and the Pacific Islands; and, development of gerontological programs in several New York institutions with high minority enrollments.

A FY 1988 grant was awarded to Gallaudet University in Washington, D.C. to develop a graduate level social work curriculum in aging and hearing impairment. The project which ended in July 1990, produced a sequence of courses and field instruction for a specialization in gerontology and hearing impairment and produced a cadre of social workers who can provide direct services, participate in community planning and conduct research for the benefit of hearing impaired elderly.

New Projects: Faculty and Program Development

In FY 1990 there continued to be a focus on program development efforts to establish or enhance gerontological expertise of faculty in health and human service professional schools. Special emphasis was given but not limited to projects in institutions of higher education with predominantly minority enrollments. The nine new projects reflect a variety of creative approaches to faculty development in gerontology. Some examples include:

San Francisco State University (CA) will develop curricula and provide training in gerontology to faculty in community colleges. This project will potentially effect the education provided to 27% of the 1.2 million California community college students. The model multi-cultural curriculum, faculty training, and intern-mentorship program will be broadly applicable to other community college systems.

The Association of Schools and Colleges of Optometry (ASCO) (Maryland) will develop a competency based module, "Managing Low Income and Minority Elderly Patients" to be incorporated in their manual, Optometric Gerontology: A Resource Manual for Educators. In addition, ASCO will conduct two regional workshops for 100 clinicians and educators on the content and use of the manual.

Tougaloo College (Mississippi) will combine research, faculty development and information dissemination to improve the availability and quality of health promotion resources for the elderly in the State.

Florida A & M University plans to conduct a training program in geriatrics and gerontology for faculty from six Historically Black Colleges and Universities (HBCUs). The program will be a guide to faculty members on the formulation of gerontology curricula for existing educational programs and for new programs on aging for professional majors.

New Projects: Education to Prepare for an Aging Society

In FY 1990, AoA awarded grants to four national aging organizations and four universities to develop public education programs about aging for individuals and groups whose members hold leadership positions in such areas as business and labor, public administration and politics, media, professional and religious organizations and academia. The goal of these projects is to improve the public image of older persons and increase public awareness about the roles that American institutions can play to enhance the experience of aging today and in the future.

The National Association of Area Agencies on Aging (Washington, D.C.) will collaborate with the National Association of Counties to use the national network of Area Agencies on Aging to educate elected and appointed county officials. These officials will learn about national aging trends, their policy implications, and solutions that other localities have taken.

North Carolina Central University (Durham, NC) will conduct 11 workshops for State and local elected officials across the country, especially minority elected officials.

University of Mississippi Medical Center will work with the Southern Governor's Association to educate Governors and their staffs in 17 States. It is planned that each State will prepare an action plan for the 21st century that addresses the needs of the elderly.

The American Bar Association Fund for Justice and Education (Chicago, IL) will develop a film and accompanying materials designed to educate employers about the Age Discrimination in Employment Act. The goal of the project is to influence employer attitudes and perceptions about older adults and to encourage them to hire and retain older workers.

West Virginia University will conduct a statewide project to increase the clergy's knowledge about aging and aging resources in the local community. One outcome of the project will be to create a permanent linkage between the church and the Area Agencies on Aging.

The University of California at Los Angeles will provide education for television professionals, such as directors, writers and producers. The project will lead to more sensitive media portrayals of older adults and improved public perceptions of the elderly.

The American Society on Aging (San Francisco, CA) will develop a multifaceted public education program designed to challenge ageist stereotypes and recommend approaches for change by educating executives of professional and trade associations, unions, volunteer organizations and religious groups.

The National Council on the Aging (Washington, D.C.) will educate the members of 20 national civic, fraternal, denominational, and professional associations about the social and economic implications of an aging society and will encourage them to undertake initiatives in their communities.

D. Short Term Training

Twelve in-service and continuing education grants were ongoing in 1990. These were awarded to State Agencies on Aging, national aging and professional organizations, and academic institutions to develop and demonstrate non-academic credit instructional programs and materials for persons working with older persons. Occupational groups represented in these grants include nursing home nurses and aides, in-home aides, housing managers, speech pathologists, correctional and parole officers, residential care home operators and hospital discharge planners. Examples of projects include:

The American Speech-Hearing-Language Association is developing and disseminating an in-service training program for paraprofessional staff of residential care facilities on the communication disorders and needs of older persons.

Drexel University is developing and disseminating a training workshop and materials for State and county probation and parole agents to improve their capacity to counsel, advise and assist adjustment of elderly ex-offenders released from correctional facilities.

The Traveler's Center at the University of Connecticut at Storrs is developing a training and demonstration program linking aging service providers and housing complex managers to support frail elderly tenants.

Georgia State University has introduced behavioral science and aging content in courses at three Georgia seminars resulting in certificates in gerontology in the ministry.

E. National Projects to Improve Accreditation Requirements in Aging

Four projects awarded in FY 1988 to national professional organizations were completed this year. These projects developed and refined instructional curricula and competency standards for those who work with older persons in the fields of social work, nursing, homemaker-home health care, physical therapy and counseling. Some of the products that emerged from these projects include a national certification process for testing and registration of homemakers and home health aides; curriculum models and resource manual for education and training physical therapists in aging; development of comprehensive competency standards for gerontological counselors and the acceptance of gerontological counseling as a recognized specialty in the counseling field.

TARGETTING - STRATEGIC RESOURCE ALLOCATION

A. Minority Management Traineeship Program

New Projects

In FY 1990 AoA funded six new projects designed to stimulate opportunities for training and employment of minorities for key management positions in the aging network. The program focuses on assisting highly motivated minority professionals, preferably with undergraduate or advanced degrees and several years of prior experience in the field of aging, to work in settings where they can serve as trainees in a management/administrative position. Three of the grantees are academic institutions, including an Historically Black College and University. Three of the grantees are minority aging organizations.

Boston College will provide full tuition in the School of Social Work for seven minority students, and place them in management positions in the aging network. Project will also include training of service providers through trainee initiated workshops on service delivery to minority older persons.

Hunter College of CUNY will provide tuition for 20 minority students in professional social work education, with focus on aging, management and minority issues. Project includes a mentoring system and a consumer advisory board.

North Carolina Central University will provide training toward a Masters in Public Administration with a gerontology focus to six current aging network employees and to seven graduate students currently enrolled in the MPA program. This is a collaborative effort of five North Carolina universities including two Historically Black Colleges and Universities, one Native American university and two non-minority universities.

National Caucus and Center on Black Aged will prepare seven Black trainees to pass the State licensure exams and to obtain permanent placement as long term care or nursing home administrators.

National Hispanic Council on Aging will place six Hispanic professionals in paid, 12 month management trainee positions in the office of the director of a variety of aging agencies. A "mentor" program is a significant component.

Asociacion Nacional Pro Personas Mayores will place six Hispanic graduates in paid, six month administrative level traineeships in public and private aging agencies.

Ongoing Projects - HBCU Initiative: Health Promotion Among Minorities

Ten projects were awarded under a FY 1989 initiative which utilizes the resources of Historically Black Colleges and Universities to focus on health promotion activities for older minority Americans. The HBCUs are developing educational materials and will train professionals to work with the minority elderly and conduct model programs to make health promotional efforts more accessible to older persons in need. Following are the institutions that are conducting projects under this initiative

- o Alcorn State University, Natchez, Mississippi
- o Florida A&M University, Tallahassee, Florida
- o Hampton University, Hampton, Virginia
- o Lincoln University, Jefferson City, Missouri
- o Morehouse School of Medicine, Atlanta, Georgia
- o Morgan State University, Baltimore, Maryland
- o Prairie View A&M University, Prairie View, Texas
- o Tougaloo College, Tougaloo, Mississippi
- o Virginia State University, Petersburg, Virginia
- o Voorhees College, Denmark, South Carolina

PROMOTION AND ENHANCEMENT OF COMMUNITY BASED SERVICE SYSTEMS

A. National Aging Resource Centers on Long Term Care - Ongoing Projects

Six national Aging Resource Centers on Long Term Care were established in FY88 for a three year period to provide training and technical information to State and Area Agencies on Aging to assist them in working with communities, public and private agencies, professionals and the public in implementing and coordinating programs and activities in a variety of topical areas. All six Centers were refunded during FY 1989 and 1990.

Each Center has a specific expertise in a field of long term care. These include case management and assessment, quality assurance, data collection and analysis, long term care management of Alzheimer's Disease Patients, Medicaid coordination, supply and training of home care personnel, and supportive services and arrangements in adult housing. Centers collect information and research results, produce issue papers, and provide consultations, training and technical assistance to State and Area Agencies in their chosen areas of emphasis.

The Centers and the Administration on Aging work jointly to develop work plans under the Centers' cooperative agreements. Each Center has conducted a needs assessment of State and Area Agencies in order to establish and prioritize its activities. The following is a brief description of each Center and its activities to date:

1. The National Aging Resource Center on Long Term Care - DECISIONS Center - at the Schools of Public Health and Public Administration, University of Minnesota, conducts activities related to community and in-home case management, with special attention to use of assessment instruments, patient and family preferences in selection of service options, professional ethics in decision making, planning and implementation of State case management systems, and use of Medicaid and Medicare waivers. The Center held two national invitational conferences - ethical issues in long-term care decision making and the use of assessment instruments - and facilitated planning and documentation of the Region IV Administration on Aging sponsored conference on long-term care. Publications and on-going work of the Center are published in a newsletter sent to more than 2,000 organizations and professionals in aging.

New publications released in FY 1990 included: Case Management in South Carolina: Review of Practices in the South Carolina Aging Network, Concepts in Case Management, Deciding Whether the Client Can Decide: Assessment of Decision-making Capability, Case Management: What is it Anyway?, and Meshing Services with Housing: Lessons From Adult Foster Care and Assisted Living in Oregon.

2. The National Aging Resource Center on Long Term Care - Alzheimer's Disease and Other Dementias - at the Suncoast Gerontology Center, University of South Florida, provides State Agencies on Aging with information, national and regional training sessions, and technical assistance to establish effective, comprehensive and coordinated statewide service systems and programs to recognize, diagnose, and provide short term treatment and long term management to Alzheimer's Disease patients, and to meet the needs of family caregivers. It serves as a bibliographic clearinghouse of publications and materials for State Agency on Aging planners and administrators. Information on new publications and the work of the Center is disseminated through a newsletter sent to aging organizations and professions, and selective health organizations performing research or supporting health care in the area of Alzheimer's Disease.

In FY 1990, the Center produced the following publications: Research Report on Dementia Specific Care Units, Caregiver Competence Paper, Resource Bibliography on Alzheimer's Disease, Ethnicity and Service Utilization, Minority Alzheimer's Caregivers: Removing Barriers to Community Services, Emergency Respite in Alzheimer's Disease, and Topics in Alzheimer's Disease: How to Establish an Alzheimer's Disease Registry.

3. The Heartland Center on Aging, Disability and Long Term Care - at the National Center for Senior Living in South Bend, Indiana, and the School of Public and Environmental Affairs, Indiana University at Indianapolis, provides technical assistance to meet the data needs and practices of State and Area Agencies on Aging in long term care planning and data analysis. Data-bases from surveys and studies which contain information pertinent to the need for provision of institutional, community and in-home services in areas of housing, health care, and social services are archived in the Center. Special emphasis is given to locating and profiling information on special populations - minorities, disabled, rural, urban, and suburban elders. Information on new publications and the work of the Center is disseminated through a newsletter sent to aging organizations and professional planners.

During FY 1990, the Center produced the following publications: Needs Assessments in the Aging Network: Guidelines and Best Practices, ADLs and Eligibility for Services: Implications for Minority Elders, AGEDATA Unmet Needs: The Challenge for Planning and Targeting of Resources, Aging in Black America: Service Needs and Utilization Patterns, The Graying of Black America: Selected Findings from the Longitudinal Study on Aging, The Survey of Income and Program Participation: SIPP As a Planning Tool for the Aging Network, The New Old: Aging in Hispanic America, The Unmet Needs of Caregivers: A Case Study in Three States, and Uses of the Annual Housing Survey for Studying Elderly Americans.

4. The National Aging Resource Center on Long Term Care at UCLA/USC - is a joint effort of the Multicampus Division of Geriatric Medicine and Gerontology at the University of California, Los Angeles, and the Andrus Gerontology Center at the University of Southern California. The Center's mission is to promote better health care partnerships among State and Area Agencies on Aging, hospitals and long term care facilities, decrease fragmentation and encourage more appropriate utilization by providers and consumers of the full range of options available to maximize the independence of older persons. The Center provides training and technical assistance in the areas of respite care, discharge planning, geriatric assessment, home modification and repair, and housing supportive services. It monitors programs and new activities at the State and national level affecting elderly housing and acute health care services. Each issue of its newsletter - distributed to more than 2,000 aging and health professionals and organizations is devoted to one of its mission areas. In FY 1990, the Center facilitated two national teleconferences on discharge planning and housing supportive services. It also facilitated an Administration on Aging Region I conference on housing.

Publications released by the Center during FY 1990 were: Discharge Planning: Training Projects to Enhance Continuity of Care, Home Modifications Resource Guide, Summary and Analysis of Administration on Aging Grant Awards in Home Modifications, Enhancing Continuity of Care: Model Practices Within the Aging Network, Respite Care: Lessons, Trends and Practices, Survey of State Unit on Aging Involvement in Discharge Planning Activities, Fact Sheet - Hospital Discharge Planning, Pending Federal Housing Legislation Affecting the Elderly, and Respite Guide: Running a Respite Care Program in the 1990's.

5. National Aging Resource Center in Long Term Care at Brandeis University provides training and technical assistance in a) community-based long term care; b) long term care public/private partnerships; and c) cultural diversity in the long term care workforce. During FY 1990 the Center coordinated 23 State and national training events; provided intensive technical assistance to 12 States; conducted cultural diversity focus groups and surveys in five cities; and, worked with the Administration on Aging to plan and implement the Commissioner's Meeting on Long Term Care.

Publications released by the Center in the fiscal year included: Emergency Issues in Long Term Care: Challenges for the Aging Network in the 1990's, Leadership Roles in Home Care Personnel Issues: A Challenge for State Units on Aging, and Strategies for Strengthening Long Term Care: Issues and Choices for the Aging Network.

B. Community Focal Points

In FY 1990 the Administration on Aging continued to support two earlier funded projects to encourage the development of senior centers as community focal points for older persons. The National Council on Aging (NCOA) prepared a focal point brochure for dissemination to the aging network, provided regional training for State and Area Agency on Aging staff on focal point designation and implementation, and began drafting a technical handbook for use by the network.

The Nebraska State Department on Aging demonstrated and evaluated a methodology for the development of community focal points in rural areas. It began work, in collaboration with NCOA, on a resource manual focused on focal point requirements in rural areas.

PREVENTION AND ALTERNATIVES TO INSTITUTIONAL CARE

During 1990 AoA conducted a wide range of activities that focus on enhancing the independence of older persons. Grants were awarded for projects to develop State long term care systems. In addition AoA continued the health promotion and disease prevention activities begun in prior years and funded some new projects designed to educate older persons about health promotion.

A. State Long Term Care Systems Development

New Projects

In FY 1990 nine grants were awarded to assist State Agencies on Aging develop collaborative efforts with other State Agencies, Area Agencies on Aging, and others to plan and implement specific improvements in State long term care systems. A variety of projects will be carried out over a two year period.

Older Alaskans Commission will carry out interagency planning efforts for "non-Medicaid" eligible populations to complement a Medicaid-only plan required by the State legislature.

Arizona Department of Economic Security/Aging and Adult Administration will demonstrate linkages of Older Americans Act and Medicaid systems in 13 rural counties.

Colorado Department of Social Services/Medical Services will link State aging, social service, Medicaid and vocational rehabilitation agencies to address Statewide case management practices.

Florida Department of Health and Rehabilitation Services/Aging and Adult Services will demonstrate the extent to which enhanced hospital based pre-admission screening and improved aging network and institutional linkages will affect community placements of older persons.

Hawaii Office on Aging will develop, in conjunction with key State agencies, Area Agencies on Aging and other segments of the aging network, a comprehensive long term care plan required by the State legislature.

Missouri Department of Social Services/Division on Aging will implement a comprehensive planning process in cooperation with Area Agencies on Aging and other State agencies.

Ohio Department on Aging will develop an interagency plan for home and community based care to provide a policy framework for recent "Eldercare" initiative approved by the State legislature.

West Virginia Commission on Aging will plan improved State longterm care system in cooperation with other key State agencies and Area Agencies on Aging.

Wisconsin Department of Health and Social Services/Bureau of Aging will demonstrate the extent to which more effective case management and improved linkages between community based and acute care providers will improve services for older persons.

B. Health Promotion

1. National Resource Center on Health Promotion and Aging

In October, 1988, AoA entered into a three year cooperative agreement with the American Association of Retired Persons (AARP) to establish a National Resource Center on Health Promotion and Aging. The principal mission of the National Resource Center on Health Promotion and Aging is to serve the State Units on Aging by providing training and technical assistance as well as providing information and other resources to agencies and organizations who are interested in health promotion and older adults. In 1989, the Resource Center continued to provide technical assistance to State Units on Aging, build its resource library and publish a bi-monthly newsletter which is distributed to 14,000 health and aging practitioners and other interested persons. In addition, the Center advertised a competition and selected nine States and one Region to receive intensive technical assistance on a specific activity or project; completed and disseminated a 45-minute video and brochure on minority health promotion models; worked with the five States in Region VI to develop a Region-wide smoking cessation strategy and with AoA and PHS to develop a national campaign for smoking cessation for older persons; assisted Region II to develop and conduct a regional conference on health promotion; began work with the nine other Regions to help them plan their regional conferences for 1991; developed a brochure about the 1990 funded health projects being conducted by ten Historically Black Colleges and Universities; developed a bibliography on minority health promotion projects; and, assisted and collaborated with the National Council on Patient Information and Education to disseminate resource materials on patient education in support of "Talk About Prescription Month" in October. AoA refunded the Resource Center in 1990 for a third year during which the Center will continue many of its current activities.

2. Prototype Health Promotion Projects

Ongoing Projects

The nine (9) self care projects funded in FY 1988 produced a variety of educational materials, models, and final reports. These projects, which were designed to produce prototype health promotion education models and campaigns, ranged from a public broadcasting television station developing a series of 300 programs on health and health promotion for seniors, to educating elderly Hispanics about the importance of various health promotion strategies.

The FY 1989 AoA Discretionary Funds Program Announcement, in keeping with Section 422(a)(2) of the 1987 Amendments of the Older Americans Act, encouraged institutions of higher education to submit applications for prototype health education and promotion programs. Nine (9) new projects totaling \$1,330,194 were funded and have focused on the following health promotion topics: nutrition education for Native Americans; injury prevention; smoking cessation; hearing impairment; physical fitness and exercise; and alcoholism. Most of these projects include the development and testing of prototype or model health education and health promotion programs which can be adapted or replicated by other States.

New Projects

Four projects were funded in FY 1990. These projects are designed to develop prototype models for educating older persons, their caregivers and families about hearing impairments, and promoting early intervention strategies for the prevention, detection and treatment of diabetes. The projects will be collaborative efforts among institutions of higher education, State Units on Aging, Area Agencies on Aging and appropriate other public and private agencies. The discretionary grants funded this year, as well as those funded in the last several years, will continue to help support AoA's substantial health promotion efforts:

University of Alabama at Birmingham - will train nutrition project staff to identify older persons with hearing problems and refer them for care. Project will target rural, low income, minority older persons.

University of Arizona - will develop a culturally appropriate health promotion program for Pascua Yaqui Indians with non-insulin dependent diabetes including therapeutic diabetic meals at senior centers and programs for exercise and weight reduction.

Boston University - will develop a statewide diabetes education initiative aimed at service providers and minority elderly to focus on etiology, symptoms, treatment and life style modifications.

Lincoln University of Missouri - will engage 10 Historically Black Colleges and Universities in a diabetic screening, referral and counseling program and a nationwide diabetes public education campaign.

3. Prevention of Fire and Smoke Related Injuries and Death

Americans over 65 years of age are three times more likely to die from fire than younger adults. To combat fire deaths and injuries among older Americans, the AoA funded four projects in 1988. These projects were designed to train providers, firefighters and the public to be more sensitive to the needs of older persons.

The three projects that concluded in FY 1989 focused on educating older persons and firefighters on the precautions to be observed to eliminate residential fire risks; rapid fire detection and suppression; and, how to increase escape chances. The fourth project, the University of Southern Maine, is continuing to work to develop a compilation of information about all the exemplary fire safety programs funded by AoA. The material will be incorporated into a program brochure and disseminated to the aging network.

4. Dental Health Promotion

In 1987 the AoA, recognizing the importance of oral health to the overall physical and mental wellbeing of older persons, funded nine dental health promotion projects. These projects, completed in FY 1990, focused on 1) providing pre-service and continuing education in geriatric dental and oral health care for dental and other health care personnel, and 2) promoting oral health care and good dental practice among older persons.

The University of Kentucky project "Oral Health Care Strategies for Family Caregivers in Appalachia" won the 1989 American Dental Association Geriatric Dental Health Care Award. The chief goal of this project was to utilize family caregivers to learn and apply strategies and interventions for oral health maintenance and to cope with oral problems of the homebound elderly with arthritis, stroke, Parkinson's Disease and Alzheimer's Disease.

C. Small Business Innovation Research Program (SBIR)

Under the Small Business Innovation Development Act (P.L. 97-219) DHHS and other Federal agencies set aside a specified portion of their research and development funds for an SBIR Program. The legislation is designed to stimulate technological innovation; use small business to meet Federal research and development needs; increase private sector commercialization of innovations derived from Federal research and development; and foster and encourage participation by minority and disadvantaged persons in technological innovation.

During FY 1990, AoA awarded three Phase I contracts under the SBIR program. These contracts address the applications of technology to meet the needs of older persons for devices which assist them to perform tasks of daily living. The specific products that will result from the 1990 awards are: 1) an affordable hygiene system designed for the disabled elderly to independently access and control of their personal hygiene safely and reliably; 2) construction of a unique air mattress for the prevention of decubiti and the enhancement of circulation; and 3) a detailed plan for educating professionals on the need for self help devices for the elderly.

D. Interagency Agreement on Technology and Aging

Another area in which AoA promoted use of technology as an alternative to institutional care is through its interagency collaboration with other Federal agencies with related concerns, resources and expertise. In 1985, AoA entered into an agreement with the National Aeronautics and Space Administration (NASA), the National Institute on Aging (NIA), the Veterans Administration (VA), and the National Institute on Disability and Rehabilitation Research (NIDRR). The purpose of this agreement is to collaborate on using NASA aerospace technology and scientific knowledge about aging to develop, produce and market devices to assist the elderly. As a result of this agreement, a prototype device to notify caregivers of wandering behavior by impaired older persons is being developed through a contract with Cortex Electronics, Inc. The device will be adaptable to institutional or in-home use.

PUBLIC PRIVATE PARTNERSHIPS

A. Washington Business Group on Health

Ongoing Project

The Washington Business Group on Health (WBGH), a national membership organization representing over 200 business and health coalitions, is receiving support for a multifaceted project entitled "Partnerships In Aging". The project focuses on the development of model partnerships between the business community and the aging network in a variety of areas including eldercare, work and retirement, and health promotion. WBGH provided small, seed grants for projects in eight localities that have now developed ongoing programs focused on caregiving, health promotion, counseling and other services for older persons and their families. Recently another round of small grants were made to another eight sites to develop additional business/aging network coalitions.

The project also develops conferences and forums focused on an aging workforce. In February, 1990, WBGH co-sponsored a conference on business and aging in San Francisco. Business representatives from all sections of the country made presentations describing their employers model programs in such areas as eldercare, older worker employment, and health promotion for retirees. In March the project co-sponsored a policy forum in Washington, D.C. on older worker employment and retirement transition programs. Special guests of the forum included Senator David Pryor and Senator John Heinz. WBGH, AoA, Senator John Glenn and Congresswoman Olympia Snowe co-sponsored a policy forum entitled "Corporate Health Promotion for Older Workers" in Washington, D.C. on June 25, 1990. The forum focused on identifying how corporate and community initiatives have begun to concentrate on the role of health promotion in improving the lives of older workers and retirees.

WBGH also produces a number of publications including a newsletter entitled "Together in Aging", as well as issue papers and training materials. The project is currently developing a series of guidebooks for human resource managers in three topic areas: eldercare; employment and retirement transition programs; and health promotion programs. The first of these reports, entitled "Working with the Business Community on Eldercare" is expected to be published this fall.

New Project

In FY 1990 the WBGH was awarded a grant to develop and disseminate training and technical assistance materials for the aging network on how to work with the private sector, particularly the business community. In addition to developing generic public private partnership training materials, actual partnerships will be developed in four sites across the country to demonstrate partnerships in specific program areas. Appropriate training materials will be developed at each site. WBGH will convene five bi-Regional conferences for aging network staff to provide them with public partnership training.

B. National Energy and Aging Consortium

The Consortium is a coalition of national public and private sector organizations concerned about the energy related needs of the elderly. Energy related needs are defined in the broadest terms to include such issues as housing, assistive devices in the home, and low income energy assistance. AoA continues to take an active role in the Consortium and serves as a member of the Steering Committee. A major focus of the Consortium is the development of State energy and aging consortia. To date, 14 such consortia have been established. In FY 1990 the Consortium will be working closely with the University of Oklahoma which was awarded an AoA grant to expand the energy and aging consortia network to other States.

C. Coming of Age in America

In FY 1990 AoA awarded a grant to Coming of Aging in America for the planning phase of a traveling exhibit which intends to educate Americans about aging and create attitudes and behaviors that will make America an exemplary society in which to grow old. The project is being developed in association with the Smithsonian Institution and the American Association of Retired Persons. The exhibit will visit shopping centers, museums and community centers in cities across the country. In addition, TV programs and newspaper supplements will take the message into almost every American home.

D. National Meals on Wheels Foundation

The National Association of Nutrition and Aging Services Program received an award in FY 1990 to develop private sector support to expand senior meals across the country. The project's primary thrust will be to assist local meals programs develop funds outside traditional Federal and State grants to meet the demands for service. NANASP will work to increase the involvement of corporate America, to encourage local charitable giving, increase public awareness and support, create national promotional events, support program innovations and provide professional training and technical assistance.

E. Eldercare: The Network's Response to the Needs of Employed Caregivers

In FY 1990 a grant was awarded to the National Association of Area Agencies on Aging to conduct a study of the extent and nature of services currently provided by the Aging Network to assist employed caregivers of older persons. As the caregiving burdens on families has become more prevalent, its impact is being felt in the workplace. State and Area Agencies on Aging are being called upon with growing frequency by the business community to become involved in the development and implementation of services for their employed caregivers. The study findings will be useful in determining eldercare policy and program directions for the Aging Network.

STRENGTHENING THE FAMILY AND GENERATIONAL BONDING

It has been demonstrated that intergenerational programs represent a valuable resource to all participants, young and old alike. In FY 1990 AoA funded 22 projects with the goal of stimulating the replication of creative intergenerational programs. Twelve of the projects represent a range of programs conducted under a variety of auspices. Ten projects focus specifically on collaborative volunteer projects in Head Start Programs.

A. Model Intergenerational Projects

The twelve grants awarded in this area will develop models in areas such as intergenerational day care, services that address effects of the drug epidemic, training of child caregivers, assistance to older persons caring for grandchildren, services for pregnant and parenting teens and their children, and replication of successful projects in other communities. Some examples include:

National Council on the Aging - will conduct a program of information gathering and dissemination of model intergenerational child care programs in collaboration with Generations United.

University of Pittsburgh (Generations Together) - will conduct a project which highlights current intergenerational programs in three Pennsylvania communities (Harrisburg, Reading and Washington) and engages them as local resources to expand their models to new sites in the State.

Our Lady of Lourdes Associates Foundation - will develop LifeLinks, an intergenerational program aimed to encourage older adult participation as role models in the lives of teen parents and their children, a "Hug Me" program for infants deficient in nurturing, and a "Family Friend" support program for AIDS and other handicapped infants.

Aid to Imprisoned Mothers, Inc. - will focus on the complex plight of grandmothers who care for grandchildren during the mother's incarceration. The program will link resources from diverse agencies to strengthen the entire family.

B. Intergenerational Volunteer Projects in Head Start Programs

In FY 1990, AoA and the Office of Head Start (OHS), Administration for Children Youth and Families are jointly funding 10 two year model projects that will demonstrate ways that Head Start agencies and aging service organizations can work together to recruit, train and use the services of older adults in Head Start classroom and in-home activities. The anticipated benefits to the children and parents enrolled in Head Start include development and reinforcement of parenting and family management skills, intergenerational role modeling, tutorial education, and enhancement of self esteem through shared activities and experiences.

TITLE IV-B: RESEARCH AND DEMONSTRATION PROJECTS

Title IV-B of the Older Americans Act authorizes funding for research and demonstration projects to identify, assess and demonstrate new approaches and methods to improve the well-being and independence of older persons. AoA-supported research is focused on contemporary issues significant to the well-being of the older population and on linking advances in our knowledge of aging and the aging process to programs and policies responsive to the changing needs of older persons and their families. AoA-funded demonstration projects seek to test new models, systems and approaches for planning and organizing effective, comprehensive services delivery systems.

Several of the AoA National Goals constitute the organizing framework for describing AoA's research and demonstration initiatives in FY 1990. These goals are:

- o Public/Private Partnerships
- o Older Persons as a Resource
- o Strengthening the Family and Intergenerational Bonding
- o Prevention and Alternatives to Institutional Care
- o Promotion and Enhancement of Effective Community Based Service Systems
- o Targetting--Strategic Resource Allocation

New and continuing research and demonstration project activities carried out in FY 1990 are highlighted below. They are arrayed under each of the six (6) AoA national goals and grouped according to specific focus areas.

1. PUBLIC/PRIVATE PARTNERSHIPS

Developing Public/Private Sector Partnerships to Meet the Needs of Older People

New Project Activities: In FY 1990 AoA made thirteen (13) new awards to State and Area Agencies on Aging to generate new resources or to expand existing resources to meet the needs of older persons by supporting the development of new or expanded public/private partnerships. Three projects will expand resources for local senior employment and training programs. Four projects will generate new resources for aging support services programs within their respective communities by establishing fund-raising non-profit corporations or business coalitions. Four projects will expand or initiate State or local eldercare programs at the worksite through provision of such services as adult daycare, counseling for caregivers, in-home care provided to frail elders by volunteers, and education for employees regarding aging. One project will demonstrate a countywide medication management system to ensure medication compliance by domiciliary residents and another project will expand health services for low income rural elderly living in isolated areas.

2. OLDER PERSONS AS A RESOURCE

Older Volunteers and In-Home Services for the Frail Elderly: AoA/ACTION Collaboration

New Project Activities: AoA and ACTION jointly awarded eleven (11) grants to support a three-year demonstration program to expand the use of Senior Companion volunteers in providing in-home services to the frail, homebound elderly. The program has the parallel objective of showing how public and private resources can be combined to support and sustain the work of Senior Companion Programs, leading toward establishing their self-sufficiency in the long term. Under each project, State Agencies on Aging, in collaboration with the appropriate Area Agencies on Aging and local Senior Companion Programs, have designated two Senior Companion projects as sites for the demonstration program. ACTION and AoA will cooperate in undertaking an evaluation of the program's effectiveness and applicability nationwide.

3. STRENGTHENING THE FAMILY AND INTERGENERATIONAL BONDING

Alzheimer's Disease Program Activities

New Project Activities: Under the FY 1990 Discretionary Funds Program, AoA made three (3) awards to help improve access to services by minority persons with Alzheimer's Disease and their family caregivers. Each project will address a different minority aging group to demonstrate innovative and effective ways to meet special information needs. Minority aging groups targeted are Blacks, Hispanics, and Asian/Pacific Islanders. Each grantee will demonstrate and evaluate what information channels and dissemination techniques are appropriate for reaching specific minority audiences.

Ongoing Project Activities: Under AoA continuation project awards, four (4) State Agencies on Aging increased their leadership capacity for making technical support and training available to those agencies in their States which serve Alzheimer's Disease victims and their families.

4. PREVENTION AND ALTERNATIVES TO INSTITUTIONAL CARE

A. Improving Services to Older Persons with Developmental Disabilities

New Project Activities: Increasingly, older persons with developmental disabilities (DD) are aging in place with their families. Consequently, the capacity of their older parents to continue as caregivers is under strain. Effective coordination and delivery of services to these individuals is urgently needed. To address these needs, four (4) grants were awarded for projects to be carried out jointly by State Agencies on Aging and State DD Planning Councils to develop aging/DD state and local planning linkages. The Administration on Developmental Disabilities (ADD) is co-funding three (3) of these projects.

These collaborative models will demonstrate and foster the replication of improved coordination and delivery of services to older persons with developmental disabilities and their aging parents. One State will produce and disseminate technical "how-to" manuals based on its experience of operating cross-network integration programs and assist other States with implementation. Another will establish: a centralized resource center for older persons with DD, their caregivers, and professionals; a caregivers' network and a protective services hotline; and an ongoing mechanism for statewide planning and collaboration. A third project focuses on: case-finding, identifying the unserved and underserved, particularly in rural areas of the State; targetting older American Indians with developmental disabilities; and on lifespan planning. The fourth project will address regulatory, program, budgetary, and other barriers to services, develop a core of 250 cross-trained personnel, and hold a national teleconference on aging and DD.

B. Quality Assurance for In-Home Supportive Services

Ongoing Project Activities: To demonstrate model quality assurance systems aimed at assuring higher standards of quality of in-home supportive services for older people, AoA made awards, beginning in FY 1989, to eleven (11) State Agencies on Aging. Those projects were continued through FY 1990 and their findings were reported on in a conference in November 1990. Some salient elements of these models are: intermediate sanctions to address substandard providers; consumer education and consumer feedback; regulatory requirements, licensure/sanctions; use of long term care ombudsmen; use of volunteers as mediators; and self-advocacy.

5. PROMOTION AND ENHANCEMENT OF EFFECTIVE COMMUNITY BASED SERVICE SYSTEMS

A. Housing and Supportive Services

New Project Activities: The Administration on Aging funded nine (9) new projects in response to a growing awareness of the needs of the vulnerable elderly who are

aging in place in federally-assisted housing. These projects, funded for a two-year period, are designed to expand the availability of supportive services to moderate and low income frail elderly who reside in federally-supported facilities. The goal is to create a system which effectively links the service needs of the elderly with housing to permit independent living and avoid the need for changing housing arrangements or institutionalization. Five grants were made to State housing finance agencies, and four grants were made to State Agencies on Aging. Project activities will include:

- o development of statewide agreements between State Agencies on Aging and State housing, health and social services and finance agencies;
- o development of community plans between local housing authorities, health and social service agencies and local government to address service needs;
- o public education on the issues related to aging in place; and
- o technical assistance to the housing network and building managers on increasing the availability of supportive services, working with the elderly and their families, accessing community resources, and acquiring information about elderly residents on a regular basis to better assess their service needs.

B. Enhancement of Nutrition Services for Older Persons

New Project Activities: Three (3) grants were awarded to identify, develop, and disseminate innovative approaches for improving nutrition programs and services for the elderly. One project represents a collaboration between aging service providers and State Agencies on Aging aimed at reviewing and enhancing the operation of Title III nutrition programs. A second project focuses on generating private sector involvement and cost sharing in the nutrition services program. The third will conduct a feasibility study of a frozen/fresh meal system for serving isolated and homebound elderly.

C. Legal Assistance for Older Persons

New Project Activities: Legal assistance providers under Title III, to be effective, need the types of support available to other lawyers. AoA made grant awards to eight (8) national organizations to provide this support to State and Area Agencies on Aging, legal services developers, and legal assistance providers. These projects will help to make more effective legal assistance available to older people, especially those in the greatest economic and social need. Special emphasis is placed on the coordination of legal and other services provider under Title III. The grantees provide substantive case consultation and training in areas of the law of special importance to older persons.

Special Statewide Legal Hotlines Announcement:

AoA has, under a memorandum of understanding with the American Association of Retired Persons (AARP), begun a special initiative to expand the availability of Legal Hotlines for older people. In 1985 AoA funded a Title IV Demonstration by AARP in Pittsburgh, Pennsylvania to develop and test a Legal Hotline for Older People. This model worked effectively and was expanded to the entire State. Later, AARP with some AoA assistance provided seed money to develop hotlines in the District of Columbia, Florida, and Texas.

The current Legal Hotlines are receiving over 12,000 calls per year. When an older person with a legal problem calls the Hotline, specially-trained lawyers provide step-by-step advice on how to resolve the problem. Issues which cannot be resolved in one call are referred to local legal aid specialists or to a panel of attorneys in private practice who agree to charge reduced fees. More than 81 percent of callers' legal questions can be resolved during the initial phone call, according to a 5 year evaluation of the existing Hotlines.

Under this new special initiative, five (5) additional Legal Hotlines are or will be receiving seed money, two from AARP (Ohio and Michigan were selected) and three from AoA. On July 6, 1990, AoA published in the Federal Register an announcement requesting preapplications for Statewide Legal Hotlines. Over 20 preapplications were received. AoA expects to fund the additional three Hotlines during FY 1991.

D. Information and Referral (I&R) Services

New Project Activities: I&R services are a major priority service for the national network on aging. For many individuals, I&R is the entry point into the services system which will allow them to find the assistance they need to remain independent and to be able to lead a life with dignity. To assist the aging network on aging in improving the quality and amount of I&R services available to older people and their caregivers, AoA has funded the following two (2) new grants:

- 1) "A National 800 Telephone Number for Locating Information and Referral Services of Area Agencies on Aging" - National Association of Area Agencies on Aging (NAAAAA)

This three-year project is designed to establish in stages a national 800 number through which callers can locate the name, address, and the information and referral telephone number for an Area Agency on Aging anywhere in the country. The expected results of this locator system include:

- o greater national recognition of existing community I&R systems through the national toll-free telephone number which will refer callers to local Area Agencies on Aging and/or their I&R providers;
- o a consistent and uniform identity for the aging network as a result of a public information campaign announcing the locator service; and
- o reduction of the difficulties faced by long-distance caregivers in linking their older parent(s) or relative(s) with appropriate supportive services.

NAAAA will make a major effort to develop financial support for the locator system from the private sector, especially corporate sponsorship.

- 2) "Enhancing the Capacity of State Aging Information and Referral Systems to Meet the Future Needs of an Aging Society" - National Association of State Units on Aging (NASUA)

This project will enhance the capacity of State aging I&R systems to meet the needs of a growing and increasingly diverse older population. Specifically, it will:

- o establish standards for I&R systems that are keyed to helping older people;
- o promote I&R systems improvement as a priority with the Aging Network;
- o facilitate the development of I&R systems improvement plans;
- o establish a national information exchange to provide access to existing I&R training materials, experts and best practices; and
- o provide training and technical assistance.

E. Community Based Systems of Care

Ongoing Project Activities: Under four (4) continuation grant awards, State Agencies on Aging are implementing models to build responsive community based systems for older persons. Each State agency is focusing on one or more unmet service needs particularly critical to the older population of the State. The effort at both the State and local levels focuses on collaboration with other State and local social service and health agencies. One State is developing models for community focal points in rural areas, while another is initiating programs to recruit, train, and retain long term care workers. A third project is focusing on the development of a community based adult day care program where currently no such program exists in the State. A fourth grantee is looking at solutions to the problem of broadening access to health care in a rural State.

Two (2) other continuation projects are demonstrating ways to promote more effective community based care to older persons. One project is seeking to determine the efficacy of using rural hospitals as community focal organizations working in conjunction with AAA's and senior centers to coordinate health and social services to older persons. The second project is demonstrating the efficacy of a state-wide health promotion campaign to prevent and treat diabetic retinopathy, particularly among high risk older populations.

6. TARGETTING - STRATEGIC RESOURCE ALLOCATION

A. Targetting Program Resources to Low Income Minority Elderly

New Project Activities: AoA awarded five (5) grants to National Minority Organizations and two (2) to local organizations to develop major outreach efforts to meet the problems of minority access to entitlement programs such as Supplementary Security Income (SSI), Medicaid, and Food Stamps. The goals of these projects are to increase awareness of entitlement programs among minority older persons and to enable them to gain greater access to supportive services and entitlement programs

B. Improved Targetting to Native American Elders

New Project Activities: In FY 1990 AoA made grant awards to three (3) Area Agencies on Aging, working in collaboration with Title VI Tribal organizations, to demonstrate new strategies to improve targetting of Federal, State, Tribal, and private resources to Native American elderly. One project will demonstrate a model service delivery system of case management and home care. A second project is developing an information and referral (I&R) program, with a needs assessment component, designed to provide better access to case management, chore, transportation and other services. The third project will demonstrate how to improve access to health and supportive services for Indian elderly through, 1) needs assessment, 2) advocacy and case management, and, 3) outreach through tribal governments and senior centers.

C. Alternatives To Guardianship

Ongoing Project Activities: Three (3) grantees continue project activities that are designed to encourage further development of alternatives to guardianship. One project is demonstrating in two states a model of early intervention services performed by trained volunteers. The model includes representative payee services, bill payer services, and development of self-help materials on money management. Another project is testing in three (3) states a national training module on guardianship alternatives and support services aimed at the aging network and a range of professionals, including social and legal services providers. Training sessions will be conducted this coming year in six (6) more states. A third project is expanding knowledge about guardianship by conducting a national survey of State practices related to the imposition and provision of guardianship services and the numbers and characteristics of adults affected by guardianship.

D. Developing Minority Elderly Agendas in National Organizations

Ongoing Project Activities: Seven (7) national aging and minority organizations continue, under AoA grant support, to develop or enhance their knowledge of minority aging issues and to broaden their capacity to deal with the concerns of low income minority elderly on an on-going basis. These organizations are engaged in the following activities: (1) creating a national network of Hispanic community-based groups committed to serving the elderly; (2) undertaking collaborative efforts between two national organizations, one of which serves the Black elderly, to develop local programs for the Black elderly using the resources of both organizations; (3) developing national support to expand research initiatives focused on issues concerning minority elderly; (4) supporting State Minority Task Forces through training and technical assistance; (5) encouraging national organizations representing components of State governments to address minority elderly issues; (6) training minority professionals to become leaders in the field of aging and; (7) supporting efforts to be responsive to the needs of elderly Pacific/Asians.

E. Studies on Alcohol Abuse and Alcoholism among the Aged

Ongoing Project Activities: Two (2) research grantees have received continuation project awards from AoA to analyze the incidence and prevalence of alcoholism among older persons. During the first year, a major part of the research efforts was focused on instrumentation and sampling techniques in preparation for the critical stages of data collection and analysis during the second project year.

F. National Aging Resource Center on Elder Abuse

Ongoing Project Activities: The National Aging Resource Center on Elder Abuse (NARCEA) is led by the American Public Welfare Association working in collaboration with the University of Delaware and the National Association of State Units on Aging. Established in FY 1989, NARCEA serves as a resource of information, data, and technical expertise on elder abuse to State and local aging and adult protective service personnel, to other professionals and practitioners concerned with elder abuse, and to the public.

The Center's technical assistance, training, dissemination, and short term research activities have focused on enhancement of knowledge and skills in elder abuse program development, agency management and service delivery, along with an increase in public awareness concerning the problem.

NARCEA provided training and technical assistance via teleconferences, conferences, publications, reports, articles in NARCEA EXCHANGE (the Center's quarterly newsletter), the information services of CANE (the Clearinghouse on Abuse and Neglect of the Elderly) and the NARCEA phoneline. In FY 1990, the Center conducted five teleconferences for State aging and adult protective services agency personnel on salient topics related to elder abuse. In addition, NARCEA convened a meeting of representatives of the Native American constituency groups to explore the problem of elder abuse within the American Indian communities. Proceedings of the meeting were published and disseminated to State and Federal agencies, tribal governments, and Title VI Program Directors.

NARCEA's principal mechanisms for information dissemination were NARCEA EXCHANGE, CANE, and the NARCEA phoneline. The newsletter was sent to 1,850 subscribers free of charge. The principal users of the CANE and NARCEA phoneline information services were State aging and adult protective services agencies, and service providers.

Short term research activities of NARCEA expanded in the second year. NARCEA called together a National Elder Abuse Research Panel, composed of nationally recognized experts, to draft a national research agenda. It is being refined and will be released next year. The research papers submitted by the panelists were compiled into "Elder Abuse and Neglect: A Synthesis of Research" and disseminated to State aging and adult protective service agencies. Other major research/technical assistance documents sent to the same audiences were "Summaries of National Elder Abuse Data: An Exploratory Study of State Statistics" and "NARCEA's Suggested Guidelines for Gathering and Reporting Domestic Elder Abuse Statistics for Compiling National Data."

NARCEA has and continues to work closely with the staff of the Long Term Care Ombudsman Resource Center on matters pertaining to the development of an AoA Elder Abuse Initiative and a Department Elder Abuse Strategy, both of which will address institutional and domestic elder abuse.

G. National Resource Center on Minority Aging Populations

Ongoing Project Activities: The National Resource Center on Minority Aging Populations was established in FY 1989 as a collaborative effort between San Diego State University and the University of Southern California. The Center was established to serve as a national focal point for technical assistance, training, information dissemination, and short-term research. Its efforts are supporting States, communities, educational institutions, professionals in the field, and the public in understanding and responding to issues affecting minority elderly.

In FY 1990, the Center continued to provide technical assistance to State Agencies on Aging via teleconferences, workshops and written materials. Two registries of resources for minority aging populations were published as well as various bibliographies and mini-reports. Six issues of the Minority Aging Exchange Newsletter were disseminated. The Center held a three-day National Symposium on Minority Aging consisting of workshops related to economic well-being, social and human relations, and quality of life for minority elderly. Presentations will be published as a monograph. Collaboration with other national aging organizations continued during the second year.

H. National Resource Center for Rural Elderly

Ongoing Project Activities: The National Resource Center for Rural Elderly was established in FY 1989 at the University of Missouri at Kansas City. Its technical assistance, training, information dissemination, and short-term research and developmental efforts are supporting States, communities, educational institutions, professionals in the field and the public in understanding and responding to issues affecting the rural elderly.

The Center is serving as a national focal point for the identification of best-practice programs and services for the rural elderly in three primary focus areas (access/transportation, health/care coordination, and housing/assisted living alternatives.) The Center conducted workshops in the areas of access/transportation, needs assessment, housing alternatives, and caregiver support during FY 1990. The Center has also developed manuals on: rural transportation; needs assessment; barriers to coordination of services in rural areas; the developmentally disabled in rural areas; and adult day care. In addition, the Center has compiled a directory of model rural programs and updated the rural elderly bibliography, first published in 1989. These products have been or will be disseminated in early FY 1991. The Center is also publishing a bi-monthly newsletter entitled "The Rural Networker" and responding to ad hoc technical assistance requests from State Agencies on Aging on a variety of issues related to the rural elderly.

Another major activity of the Center has been the planning and cosponsorship of a national conference on rural elderly issues. This national conference will be held in Kansas City, Missouri in October 1990.

7. OTHER ADMINISTRATION ON AGING R&D ACTIVITIESA. Field-Initiated Research And Demonstrations

New Project Activities: Under the FY 1990 Discretionary Funds Program, AoA made several new awards to projects with the potential for making significant contributions to policy, planning, and improving services to the elderly. Each of these projects addresses important aging issues with national interest and implications that affect significant numbers of the aging population or especially vulnerable sub-groups. The projects cover such salient areas as: effective interventions to combat elder abuse; health promotion for older minority women; employment opportunities and recruitment in the field of aging and among older workers in general; energy and aging issues; and family caregiving and in-home care for the frail elderly.

SECTION V -EVALUATION

During this fiscal year the Administration on Aging started planning for a major evaluation of Title III-C-1 and Title III-C-2 of the Older Americans Act of 1965, as amended. The Elderly Nutrition Program (ENP) which delivers congregate and home delivered meals is the largest program expenditure (\$408 Million) funded by AoA.

The ENP has grown and changed considerably since it was last studied by AoA in 1982. The program now serves over 243 million meals annually to more than 3.5 million elderly participants. Because of the magnitude of the program, two years from the funding of the project (if resources are available) will be required to complete the study. The findings will be useful to the AoA, all State and Area Agencies on Aging, and all ENP providers for evaluating the efficacy of the program and developing guidance for future operations.

SOCIAL SECURITY ADMINISTRATION

PROGRAMS ADMINISTERED BY THE SOCIAL SECURITY ADMINISTRATION—FISCAL YEAR 1990

The Social Security Administration (SSA) administers the Federal old-age, survivors, and disability insurance (OASDI) program (title II of the Social Security Act). OASDI is the basic program in the United States that provides income to individuals and families when workers retire, become disabled, or die. The basic idea of the cash benefits program is that, while they are working, employees and their employers pay earmarked Social Security taxes; the self-employed also are taxed on their net earnings. Then, when earnings stop, or are reduced because of retirement in old age, death, or disabilities, cash benefits are paid to partially replace the earnings that were lost. Traditionally, current taxes have largely been paid out in current benefits. Social Security taxes are deposited to the Social Security trust funds and are used only to pay Social Security benefits and administrative expenses of the program. Amounts not currently needed for these purposes are invested in interest bearing obligations of the United States. Thus current workers help to pay current benefits and, at the same time, build rights to future benefits.

SSA also administers the Supplemental Security Income (SSI) program for needy aged, blind, and disabled people (title XVI of the Social Security Act). SSI provides a federally financed floor of income for eligible individuals with limited income and resources. SSI benefits are financed from general revenues. In about 65 percent of the cases, SSI is reduced due to individuals having countable income from other sources, including Social Security benefits.

SSA shares responsibility for the black lung program with the Department of Labor. SSA is responsible, under the Federal Coal Mine Health and Safety Act, for payment of black lung benefits to coal miners and their families who applied for those benefits prior to July 1973, and for payment of black lung benefits to certain survivors of miners.

Local Social Security offices process applications for entitlement to the Medicare program and assist individuals with questions concerning Medicare benefits. Overall Federal administrative responsibility for the Medicare program rests with the Health Care Financing Administration, HHS.

Following is a summary of beneficiary data, selected administrative activities, precedential court decisions, and Social Security-related legislation enacted in fiscal year 1990.

I. OASDI BENEFITS AND BENEFICIARIES

At the beginning of 1990, about 95 percent of all jobs were covered under the Social Security program. It is expected that, under the present law, 96 percent of the jobs will be covered by the end of the century.

At the end of September 1990, 39.7 million people were receiving monthly Social Security cash benefits, compared to 39 million in September 1989. Of these beneficiaries, 24.7 million were retired workers, 3.5 million were dependents of retired workers, 3.5 million were dependents of retired workers, 4.2 million were disabled workers and their dependents, 7.2 million were survivors of deceased workers and about 8,000 were persons receiving special benefits for uninsured individuals who reached age 72 some years ago ("Prouty payments").¹

The monthly amount of benefits paid for September 1990 was \$20.4 billion, compared to \$19 billion for September 1989. Of this amount, \$15.1 billion was paid to retired workers and their dependents, \$1.8 billion was paid to disabled workers and their dependents, \$3.5 billion was paid to survivors, and \$1.2 billion was paid to uninsured persons who reached age 72 in the past.¹

Retired workers received an average benefit for September 1990 of \$570 (up from \$540 in September 1989), and disabled workers received an average benefit of \$556. Retired workers newly awarded Social Security benefits for September 1990 averaged \$542, while disabled workers received an average initial benefit of \$567.

During the 12 months ending September 1990, \$243 billion in Social Security cash benefits were paid, compared to \$227 billion for the same period last year. Of that total, retired workers and their dependents received \$168.9 billion, disabled workers and their dependents received \$24.3 billion, survivors received \$49.9 billion, and uninsured beneficiaries over age 72 received \$17 million.¹

¹ The cost of these special benefits for aged uninsured persons are financed from general revenues, not from the Social Security trust funds.

Monthly Social Security benefits were increased by 4.7 percent for December 1989 (payable beginning January 1990) to reflect a corresponding increase in the Consumer Price Index (CPI).

Monthly Social Security benefits will be increased by 5.4 percent for December 1990 (payable beginning January 1991) to reflect a corresponding increase in the CPI.

II. SUPPLEMENTAL SECURITY INCOME BENEFITS AND BENEFICIARIES

In January 1990, SSI payment levels (like Social Security benefit amounts) were automatically adjusted to reflect a 4.7 percent increase in the CPI. From January through December 1990, the maximum monthly Federal SSI payment level for an individual was \$386. The maximum monthly benefit for a married couple, both of whom were eligible for SSI, was \$579. In January 1991, these monthly rates will increase to \$407 for an individual and \$610 for a couple, to reflect a 5.4 percent increase in the CPI.

As of June 1990, 4.7 million aged, blind, or disabled people received Federal SSI or federally administered State supplementary payments. Of the 4.7 million recipients on the rolls during June 1990, about 2 million were aged 65 or older. Of the recipients aged 65 or older, about 565,000 were eligible to receive benefits based on blindness or disability. About 2.6 million recipients were blind or disabled and under age 65. During June 1990, Federal SSI benefits and federally administered State supplementary payments totaling a little over \$1.4 billion were paid.

For fiscal year 1990, an estimated \$14.5 billion in benefits (consisting of \$11.6 billion in Federal funds and \$2.9 billion in federally administered State supplementary payments) were paid.

III. BLACK LUNG BENEFITS AND BENEFICIARIES

Although responsibility for new black lung miner claims shifted to the Department of Labor (DOL) in July 1973, SSA continues to pay black lung benefits to a significant, but gradually declining, number of miners and survivors. (While DOL administers new claims taken by SSA under part C of the Federal Coal Mine Health and Safety Act, SSA is still responsible for administering part B of the Act.)

During September 1990, about 212,000 individuals (160,000 age 65 or older) received \$71 million in black lung benefits which were administered by the Social Security Administration. These benefits are financed from general revenues. Of these individuals, 46,000 miners received \$17 million, 115,000 widows received \$43 million, and 54,000 dependents and survivors received \$11 million. During fiscal year 1990 SSA administered black lung payments in the amount of \$867 million. About 48,000 miners and 117,000 widows and wives were age 65 or older.

Black lung benefits increased by 3.6 percent effective January 1990 due to an automatic general benefit increase adjustment under the law. The monthly payment to a coal miner disabled by black lung disease increased from \$358.90 to \$371.80. The monthly benefit for a miner or widow with one dependent increased from \$538.40 to \$557.70 and with two dependents from \$628.10 to \$650.70. The maximum monthly benefit payable when there are three or more dependents increased from \$717.80 to \$743.60.

IV. COMMUNICATION AND SERVICES

INFORMATION ACTIVITIES

Throughout 1990, the Social Security Administration's public information activities continued to emphasize educating the public about how the program works, the services available and how members of the public can avail themselves of those services, as well as the value of Social Security. Efforts were also made to assure the public that the program continued to be financially sound.

SSA was successful in countering misleading advertising using the statutory authority in section 1140 of the Social Security Act. (That section prohibits misuse of symbols, emblems, or names in reference to Social Security and Medicare.) More than a dozen advertisers agreed to cease their misleading practices.

SSA continued to emphasize the value of the "Personal Earnings and Benefit Estimate Statement" (PEBES) as a tool in a person's retirement planning. By completing a simple form, today's workers can get an estimate of their future retirement benefits, along with estimates of disability and survivors benefits. SSA, in cooperation with the Advertising Council, conducted a national campaign which empha-

sized the value of PEBES and provided the Consumer Information Center address in Pueblo, CO, as the source for PEBES request forms.

A significant effort was made to educate the public about the services available through SSA's toll-free telephone number (1-800-2345-SSA). These services include, but are not limited to, making appointments, changing to direct deposit, reporting changes which affect benefit payments or eligibility, and getting the answers to questions about Social Security and Supplemental Security Income.

During 1990, SSA reviewed and rewrote most of its public information pamphlets and brochures to make them simpler to read and easier to understand. The new publications will be available in early 1991. Actions were taken during the year to improve and expand services to the Hispanic community. More forms and notices will be available in Spanish, as will publications.

SSA redesigned and enlarged its monthly newsletter, "Information Items," which goes to national groups and organizations as well as to SSA field offices, to make it more usable by those who receive it. Also, its name was changed to "Social Security News."

In addition, SSA conducted its usual public information activities to support field administration of its programs. About 50 English and Spanish publications explaining Social Security, Supplemental Security Income, and Medicare were produced in 1990. SSA also produced public service announcements for radio and television, exhibits, and a variety of other informational materials for field office use in explaining the Social Security programs to the American public.

SUPPLEMENTAL SECURITY INCOME OUTREACH

During 1990, SSA intensified its efforts to reach people who would be eligible for SSI if they were aware of the program and applied for its benefits. Based on its three-pronged approach to outreach developed in 1989 (provide information and promote better understanding, reach out to those who know about the program but are reluctant to apply, and to make the application process easier) SSA took a number of actions during 1990. These included:

- In February 1990, issuing guidelines for field offices for ongoing outreach activity;

- Designing comprehensive training materials for community organizations;

- Rewriting and redesigning public information materials, developing new products and improving distribution;

- Developing a more positive image for SSI;

- Continuing to support outreach efforts by other organizations; and

- Developing models for facilitating the application process.

As a significant part of this effort, SSA has made 25 grants to groups and organizations throughout the country to conduct SSI outreach demonstration projects. A primary purpose of the projects is to inform low-income elderly, disabled, and blind people about SSI and help those who may be eligible to apply.

The projects will test various methods of getting people to apply for SSI that can be duplicated elsewhere. The projects covered by the grants include both rural and urban areas and are designed to reach diverse ethnic and racial groups, including elderly, disabled, and blind adults and blind and disabled children in many parts of the country. Projects are also aimed at the hardest to reach—people without a permanent home.

Additional activities underway to help identify homeless people who might be eligible for SSI include:

- Whenever possible, Social Security offices have appointed a "homeless coordinator" to serve as liaison in the community;

- SSA employees around the country serve on community health and welfare councils and maintains working relationships with organizations that serve the needs of the homeless; and

- Local offices maintain resource and referral guides to ensure they have the latest information concerning resources and services available to the homeless.

V. PRECEDENT-SETTING COURT DECISIONS THAT AFFECT THE ELDERLY MADE DURING FISCAL YEAR 1990

Sullivan v. Everhart, et al.—Netting "Overpayments" and "Underpayments"

On February 21, 1990, the Supreme Court in a 5-4 decision, ruled that the Secretary's "netting" regulations are based on a valid interpretation of the Social Security Act. Under those on a valid interpretation of the Social Security Act. Under those regulations, the Social Security Administration makes retroactive payment de-

terminations under titles II and XVI of the Act by computing the difference between any amounts that are due for that same period ("underpayments") and any amounts that previously were paid in error for that same period ("overpayments"). The Supreme Court rejected the argument that by "netting" SSA recovers overpayments without affording recipients their right to an oral hearing on waiver of recoupment, a right that the Supreme Court established in 1979 in *Califano v. Yamasaki*. The Court in *Everhart* stated that it is not unreasonable to conclude that waiver hearings were established only for individuals whose overpayments will be recouped by a reduction in their future benefits or by cash repayments.

The U.S. Court of Appeals for the Tenth Circuit had previously affirmed the *Everhart* district court's ruling that netting violates the Social Security Act's waiver of recovery of overpayment provisions.

VI. SUMMARY OF LEGISLATION ENACTED DURING CALENDAR YEAR 1990 THAT AFFECTS SSA

SSA-related enactments during the 101st Congress, second session, calendar year 1990, included:

Americans With Disabilities Act of 1990 (S. 993)—P.L. 101-336, signed July 26, 1990

The Americans with Disabilities Act of 1990 (ADA) establishes a clear and comprehensive prohibition of discrimination on the basis of disability and provides a national mandate to bring people with disabilities into the economic and social mainstream of American life. The ADA ensures that individuals with disabilities cannot be denied their pursuit of basic rights—among them, the right to hold a job, ride public transportation, and gain access to public places.

Federal agencies, such as SSA, are already covered by the similar provisions of the Rehabilitation Act of 1973. The direct effect of the ADA on SSA is that SSA is required to include closed-captioning in all of its televised public service announcements.

Radiation Exposure Compensation Act (H.R. 2372), P.L. 101-426, signed October 15, 1990

Provides monetary compensation for injuries due to exposure to radiation from nuclear testing and uranium mining. Payments received under this law will not be counted as income or resources under certain programs, including Social Security, Supplemental Security Income, AFDC, food stamps, black lung benefits, and Medicaid.

Seneca Nation Settlement Act of 1990 (H.R. 5367), P.L. 101-503, signed November 3, 1990

Permits the Seneca Nation to renegotiate leases which will expire February 19, 1991. As a result, additional payments are expected to be made to the Seneca Nation. None of the payments, funds or distributions as a result of this Act and none of the income derived therefrom will be countable income or resources under the SSI program.

Omnibus Budget Reconciliation Act of 1990 (H.R. 5835), P.L. 101-508, signed November 5, 1990

OASDI Provisions

1. *State and Local Coverage*—After July 1, 1991, extends OASDI coverage to State and local government employees (except students employed by the educational institution which they attend) not participating in a public employee retirement system.
2. *Continuation of Disability Benefits During Appeal*—Makes permanent the temporary provision permitting disability beneficiaries to elect to have their disability benefits and Medicare protection continued through the hearing level of appeal in medical cessation cases.
3. *Definition of Disability for Widow(er)s*—Provides for disabled widow(er)s the same definition of disability that applies to disabled workers. Includes provisions for maintaining Medicaid eligibility for Supplemental Security Income (SSI) recipients who may qualify for Social Security benefits and lose SSI eligibility because of this change and for facilitating their qualifying for Medicare.
4. *Adopted Child*—Modifies dependency requirements to permit a child adopted by a surviving spouse to be entitled to benefits based on the deceased worker's earn-

ings, if the child was either living with or receiving one-half support from the worker at the time of the worker's death.

5. *Representative Payees*—Provides numerous modifications in representative payee provisions relating to investigations of potential representative payees, standards for determining the fitness of potential payees, and the compiling and maintaining of relevant files. Other provisions include:

- Generally limiting to 1 month the deferral or suspension of direct payment of benefits pending selection of a payee;
- Allowing certain nonprofit social service agencies to charge beneficiaries a statutorily limited fee for providing payee services; and
- Requiring SSA to repay to the beneficiary or an alternate payee an amount equal to any misused funds resulting from SSA's negligent failure to investigate or monitor a representative payee.

6. *Attorney Fee Process*—In claims involving past-due benefits, would streamline the process by which SSA approves fees charged by persons representing claimants before the Agency. In cases where the claimant and an attorney or other representative submit a written agreement to the Secretary for a fee up to the lesser of 25 percent of past-due benefits or \$4,000, the Secretary is required to approve the agreement.

Also, limits reimbursement for travel expenses for claimants' representatives to the maximum amount legally allowable for travel originating within the geographic area of the office having jurisdiction over the administrative proceedings.

7. *Administrative Res Judicata*—Provides that if, as a result of a good faith reliance on incorrect, incomplete, or misleading information provided by SSA concerning the consequences of reapplying for benefits instead of requesting a review of an adverse determination, a claimant for Social Security or SSI benefits does not timely appeal an adverse initial or reconsideration determination but instead files a new application, the new application could not be denied on the basis that the claimant did not timely appeal the earlier determination. Also, requires SSA to describe, in adverse determination notices, the effect on possible entitlement of choosing to reapply instead of appealing.

8. *Telephone Service Center Demonstration Projects*—Provides for establishing demonstration projects in not less than three telephone service centers requiring that a written receipt be provided to callers to SSA's toll-free telephone number who request information about potential or current eligibility or entitlement to benefits. The projects must begin by May 4, 1991, and last 1 to 3 years. Requires the Secretary to report to Congress on the projects no later than 90 days after termination.

9. *Social Security Notices*—Requires that Social Security notices issued on or after July 1, 1991, be written in clear and simple language, and contain the address and telephone number of the local office which serves the individual. If the notice is not produced in a local servicing office, it would have to contain the address of the local office serving the individual and a telephone number through which that office can be reached.

10. *Telephone Access*—By May 4, 1991, requires SSA to restore telephone access to local Social Security offices to the level generally available as of September 30, 1989, and to request the publication in telephone books of telephone numbers and addresses of local offices which provide direct telephone access. Requires the Secretary to report to Congress, by January 1, 1993, on the impact of the provision on SSA and present a plan to use new technologies to enhance access to SSA, including local offices. Requires reports by GAO on the level of telephone access to local offices not later than 120 days (interim) and 210 days (final report) after enactment.

11. *Amendments Relating to Social Security Account Statements (PEBES)*—Requires that, beginning no later than October 1, 1999, SSA send each year to all workers covered under Social Security a statement concerning earnings and potential benefits. (Prior law required statements be sent every 2 years beginning in October 1999.) Also, authorizes the Secretary of the Treasury to disclose address information in IRS records to SSA for mailing the statements.

12. *Trial Work Period (TWP) During Rolling 5-Year Period for All Disabled Beneficiaries*—Provides that a disabled beneficiary exhausts his 9-month trial work period only if he performs services in 9 months in a rolling 60-month period, i.e., within any period of 60 consecutive months. Also, repeals the provision which precludes a reentitled disabled worker from being eligible for a TWP.

13. *Continuation of Benefits on Account of Participation in a Non-State Vocational Rehabilitation (VR) Program*—Extends to DI and SSI beneficiaries who medically recover while participating in an approved non-State VR program the same benefit

continuation rights as those who medically recover while participating in a State VR program.

14. *Limitation on New Entitlement to Special Age-72 Payments*—Precludes the payment of so-called "Prouty benefits" to persons reaching age 72 after 1990 who otherwise could have been entitled to these benefits.

15. *Modification of Advance Tax Transfer*—Provides for crediting the trust funds with Social Security tax receipts as they are collected throughout the month, rather than in advance (at the first of the month), as under prior law. However, the advance tax transfer mechanism would be retained as a contingency to be used if the trust funds drop to such a low level that it is needed in order to pay benefits.

16. *Retroactive Reduced Benefits*—Repeals the provision which permits a person to elect up to 6 months of retroactive reduced benefits in order to charge off any excess earning under the retirement earnings test that he or she may have in the year of filing. Also, repeals a similar provision which allows retroactive reduced benefits in cases where unreduced auxiliary benefits are payable.

17. *Old Computations*—Eliminates and consolidates old computation methods. Provides for computing benefits of all newly entitled beneficiaries, who under prior law would have their benefits computed under one of the old, little-used computations, under a newer method.

18. *Auxiliary Benefits*—Codifies SSA policy that provides for suspension of benefits to auxiliary beneficiaries when the disabled worker's benefits are suspended because he is engaging in substantial gainful activity during the 36-month "extended period of eligibility" that follows the trial work period.

19. *Deemed Spouse*—Provides for paying benefits to a deemed spouse (a person who entered into an invalid ceremonial marriage in good faith) regardless of whether the legal spouse is entitled to benefits on the same earnings record. Where both a deemed spouse and a legal spouse are entitled to benefits, the legal spouse would be paid outside the maximum family benefit. Also, provides benefits to divorced deemed spouses.

20. *Vocational Rehabilitation (VR) Demonstration Projects*—Requires the Secretary to conduct demonstration projects, running for 3 years in at least three States. The purpose of the projects is to assess the advantages and disadvantages of permitting disabled beneficiaries to select a qualified rehabilitation provider, either public or private, to furnish them with rehabilitation services aimed at enabling them to engage in substantial gainful activity and to leave the disability rolls.

21. *Legalized Aliens (Exemption From Prosecution)*—Provides that persons who received permanent or temporary legal residence in the United States under specified statutes are not subject to prosecution under the Social Security Act for furnishing false information regarding earnings or misusing a Social Security card, except those involved in the production and sale of a Social Security card, if such conduct occurred prior to January 4, 1991.

22. *Reduction in Earnings Needed for a Year of Coverage Toward the Special Minimum Benefit*—Reduces the amount of earnings needed to earn a year of coverage toward the special minimum benefit (designed to assist long-term, low-wage workers) from 25 percent of the old-law contribution and benefit base (\$9,900 in 1991), to 15 percent of that base (\$5,940 in 1991).

23. *Treatment of Earnings of Corporate Directors*—Treats directors' earnings as taxable and creditable for Social Security purposes for the year the earnings are received. Directors' earnings continue to be treated as earned in the year the services are performed for purposes of the Social Security retirement test.

24. *Collection of Employee Social Security and Railroad Retirement Taxes on Taxable Group-Term Life Insurance Provided to Former Employees*—Provides that if an employer provides taxable group-term life insurance to an individual who has left his employment, the former employee is required to pay the employee portion of the FICA tax through the income tax system.

25. *Waive 2-Year Waiting Period*—Eliminates the 2-year waiting period for entitlement to divorced spouse's benefits without regard to the worker's earnings in situations in which the worker was entitled to benefits before the divorce.

26. *Preeffectuation Review*—Changes the present 65-percent review of all favorable disability determinations by State agencies prior to final action to a 50-percent review of title II allowances and review of a sufficient number of other favorable determinations to ensure a high degree of accuracy. Also, requires a written report to pertinent congressional committees not later than April 1, 1992, and annually thereafter, setting forth the number of preeffectuation reviews conducted during the preceding fiscal year and the Secretary's findings relating to the accuracy of the Disability Determinations Services' determinations.

27. *Recovery of OASDI Overpayments by Means of Reduction in Tax Refunds*—Permits SSA to recover overpayments from former beneficiaries by means of offsetting income tax refunds under the same authority applicable to other Federal programs (which expires January 10, 1994).

28. *Statement of Actuarial Balance*—Requires that the annual OASDI trustees report includes a finding as to whether the trust funds are in close actuarial balance, as defined by the trustees.

Supplemental Security Income (SSI) Provisions

29. *Attainment of Age 65 Not To Serve as Basis for Termination of Eligibility Under Section 1619(b)*—Eliminates the age 65 limit for Medicaid-only eligibility under the section 1619(b) work incentive provision for individuals whose SSI eligibility is based on a determination of disability or blindness.

30. *Treatment of Royalties and Honoraria as Earned Income*—Treats royalties earned in connection with the publication of an individual's work and honoraria received for services rendered as earned, rather than unearned, income for purposes of SSI eligibility and benefit determinations.

31. *Exclusion From Income and Resources of Victims' Compensation Payments*—Excludes from income for SSI purposes payments received from a State-administered fund established to aid victims of crime. Also, excludes such payments from resources for a 9-month period beginning the month after they are received, to the extent that recipients demonstrate that the amounts are compensation for expenses incurred or losses suffered as a result of crimes. In addition, a victim of a crime would not be required to accept victims' compensation payments as a requirement for SSI eligibility.

32. *Exclusion From Income of Impairment-Related Work Expenses*—Provides for excluding impairment-related work expense (IRWE) from income in determining initial eligibility and reeligibility for SSI benefits and State supplementary payments. (IRWE have previously been excluded only in determining benefit amounts, substantial gainful activity, and continuing eligibility.)

33. *Certain State Relocation Assistance Excluded From SSI Income and Resources*—Excludes from income certain payments received as State or local government relocation assistance. If not expended, such payments also will be excluded from resources for a 9-month period beginning with the month after they are received. The provision is effective for benefits for months in the 3-year period beginning with May 1991 and ending with April 1994.

34. *Evaluation of Children's Disabilities by a Pediatrician or Other Qualified Specialist*—Requires the Secretary of Health and Human Services to make reasonable efforts to ensure that a qualified pediatrician or other specialist in a field of medicine appropriate to the disability of the child evaluate the case of a child under age 18 for purposes of determining eligibility for SSI disability benefits.

35. *Reimbursement for Vocational Rehabilitation Services Furnished During Certain Months of Nonpayment of SSI Benefits*—Authorizes reimbursement for vocational rehabilitation services provided in months for which individuals were not receiving Federal SSI benefits but were in "special status" under section 1619(b) or suspended benefit status or were receiving federally administered State supplementary payments.

36. *Extension of Period for Presumptive Eligibility for Benefits*—Extends from 3 to 6 months the period for which benefits may be paid on the basis of presumptive disability or blindness pending a determination of disability or blindness.

37. *Continuing Disability Reviews Not Required More Than Once Annually*—Limits continuing disability reviews for purposes of the work incentive provisions of section 1619 to no more than one in any 12-month period.

38. *Concurrent SSI and Food Stamp Applications by Institutionalized Individuals*—Provides that the Secretaries of HHS and Agriculture shall develop a procedure under which an individual about to be released from a public institution who applies for SSI may also apply for benefits under the food stamp program, using a separate but concurrent application.

39. *Notification of Certain Individuals Eligible To Receive Retroactive Benefits*—Requires the Secretary, when notifying individuals eligible under *Zebley* (a Supreme Court decision which requires SSA to reopen many previously denied childhood disability determinations and which may result in retroactive SSI payments), to provide a clearly written notice explaining (1) the fact that retroactive SSI payments are excluded from resources under SSI for 6 months only; (2) the potential effects on future SSI eligibility of receiving retroactive payments; (3) the possibility of establishing a trust account that would not be considered as income or resources under

SSI; and (4) that legal assistance in establishing such a trust may be available from various legal referral services.

Other Provisions of Interest

40. *Social Security Trust Funds and Budget Process*—Explicitly removes the Social Security trust funds from deficit calculations for Gramm-Rudman-Hollings purposes. The new law also includes numerous changes in the congressional budget process and provisions designed to facilitate enforcement of the deficit reductions that are expected to be achieved under the legislation.

41. *Payroll Tax Deposit Schedule*—Accelerates the deposit schedule for 1991 and later for employers whose withheld Social Security and income taxes total \$100,000 or more as set by regulations.

42. *Taxpayer Identification Number (TIN)*—For tax returns for taxable years beginning after December 31, 1990, reduces from 2 years to 1 year the age at which a TIN (usually a Social Security number) must be shown for a dependent claimed on an income tax return.

43. *Tax and Earnings Verification for Department of Veterans Affairs (DVA) Benefits*—Provides for using Social Security and IRS data for income verification for applicants or recipients of specified DVA benefits after notifying them of such use.

44. *SSN Use and Death Notification for DVA*—Requires applicants for or recipients of veterans compensation or pension benefits who have social security numbers to furnish those numbers at the request of the DVA. Also, requires the DVA to periodically check HHS death information with respect to DVA beneficiaries.

45. *Modification of Earned Income Tax Credits (EITC)*—Increases EITC rates and excludes tax refunds and payments from employers related to EITCs from income in the month of receipt and from resources in the month following the month of receipt under the SSI, AFDC, Medicaid, and food stamp programs.

46. *Increase the Hospital Insurance (HI) Contribution Base*—Increases the amount of earnings that will be subject to the HI tax to \$125,000 for 1991, with automatic adjustments as wages rise thereafter. (The OASDI contribution base for 1991 is \$53,400.)

47. *Increase Part B Premium*—Increases the Supplemental Medical Insurance premium to \$29.90 in 1991, \$31.80 in 1992, \$36.60 in 1993, \$41.10 in 1994, and \$46.10 in 1995.

48. *Debt Limit Increase*—Increases the permanent statutory debt limit from \$3.123 trillion to \$4.145 trillion, which is expected to accommodate public borrowing through the first few months of 1992.

Treasury, Postal Service, and General Government Appropriations Act, 1991 (H.R. 5241), P.L. 101-509, signed November 5, 1990

Administrative Law Judges (ALJs) Pay Increase. For ALJs, including those who decide Social Security and black lung benefits cases, provides for three levels of basic pay rates commensurate with pay rates at level IV of the Executive Schedule. Effective not earlier than 90 days, and not later than 180 days, after the date of enactment.

Federal Employees Pay Increase. Provides for a 4.1 percent cost-of-living adjustment for General Schedule employees for 1991.

Black Lung Benefit Increase. Increases black lung benefit amounts by 4.1 percent effective January 1991 as a result of the provision which increases Federal pay rates. (Black lung benefit levels are tied to the Federal pay scale of GS-2, Step 1.)

Departments of Labor, Health and Human Services, and Education and Related Agencies Appropriations for FY 1991 (H.R. 5257), P.L. 101-517, signed November 5, 1990

The legislation provides approximately \$4.2 billion for SSA's Limitation on Administrative Expenses account, including a contingency reserve of \$146.4 million, and \$14 billion for the SSI program.

The Senate Committee on Appropriations report (101-516) on H.R. 5257 directs the Social Security Administration to: (1) update its guidelines on chronic fatigue syndrome (CFS) by including a wide range of current medical information on this illness such as the research definition developed by the Centers for Disease Control, (2) increase awareness of this illness by all staff involved in disability claims processing, and (3) provide a report to the committee from the Commissioner, during the first quarter of the fiscal year, on SSA activities related to this illness.

The House Committee on Appropriations report (101-591) on H.R. 5257 directs SSA to do everything necessary to facilitate a consistent national policy for resolving claims filed by persons apparently suffering from chronic fatigue syndrome and encourages SSA to ensure that such claims are evaluated by staff who are fully informed of the latest medical information on CFS.

While committee report language does not have the effect of law, it does reflect a strong congressional concern in this area.

Deceptive Mailings Prevention Act of 1990 (H.R. 2331), P.L. 101-524, signed November 6, 1990

Provides that any solicitation by a nongovernmental agency for purchase or payment of a product or service which implies any Federal Government connection or approval may not be carried or delivered by the Postal Service unless it contains a conspicuous disclaimer of Government endorsement.

Food and Agricultural Resources Act of 1990 (S. 2830), P.L. 101-624, signed November 28, 1990

Requires that all applicants for and recipients of SSI be informed of the availability of:

- benefits under the food stamp program; and
- a "simple application" to participate in the food stamp program at the Social Security office.

Requires an audit by the Comptroller General of the programs established under the Food Stamp Act of 1977 under which food stamp applications may be made at Social Security offices. The audit would examine the current operation of the programs, the possible expansion of the programs to include all applicants for and receipts of Social Security benefits, and the feasibility of a joint food stamp/SSI application. A report is required by December 31, 1991.

Establishes an Advisory Committee on Welfare Simplification and Coordination, with members appointed by the Secretary of Agriculture after consultation with various officials, including the Secretary of Health and Human Services. Directs the committee to evaluate differing policies in public assistance programs, recommend common or simplified programs and policies, and submit a final report no later than July 1, 1993.

Requires wholesale or retail food stores that apply to redeem food stamps to provide, at the request of the Secretary of Agriculture, their employer identification number and the Social Security numbers (SSN) of the officers and owners. Also provides safeguards for the confidentiality of SSN information gathered for this purpose.

Requires Federal Crop Insurance Act policyholders to furnish their SSNs to qualify for the multiple peril crop insurance program. Also provides safeguards for the confidentiality of SSN information gathered for this purpose.

Cranston-Gonzalez National Affordable Housing Act (S. 566), P.L. 101-625, signed November 28, 1990

Directs the Secretary of Housing and Urban Development (HUD) to establish demonstration programs with the Housing Authority of the City of Chicago and not more than three other public housing agencies. The provision prohibits Federal programs from considering any increases in earned income that any member of a family experiences while participating in the demonstration project for purposes of determining eligibility or benefit amount unless the income of the family equals or exceeds 80 percent of median income of the area.

Establishes a HUD/Department of Agriculture program of congregate services, including subsidized meals, to residents of certain housing projects in order to foster independent living with assistance, rather than institutionalization. Also provides that such services may not be considered as income for purposes of determining eligibility for or the amount of assistance under any Federal, federally assisted, or State program based on need.

OFFICE OF INSPECTOR GENERAL

INTRODUCTION

The mission of the Office of Inspector General (OIG) is to prevent and detect fraud, waste and abuse in the Department of Health and Human Services (HHS) programs and to promote efficiency and economy in its operations. It is the Inspec-

tor General's responsibility to report to the Secretary and the Congress any deficiencies or problems relating to HHS programs and to recommend corrective action, where appropriate.

As a result of a Congressional oversight initiative into disclosures of fraud and waste in Federal/State Medicaid and welfare programs, Public Law 94-505 was passed, creating the statutory Inspector General in HHS. Enacted in 1976, the law placed equal emphasis on the Inspector General's obligation to detect wrongdoing and to make recommendations for changes and improvements in HHS programs.

The OIG works in a coordinated, cooperative way with other departmental components to accomplish its mission, except when the Inspector General believes that such a relationship would compromise the integrity and independence of the office. Close working relationships are established with the Social Security Administration (SSA), the Health Care Financing Administration (HCFA), the Office of Human Development Services (HDS) and the Public Health Service (PHS) and with other major Federal agencies, such as the Department of Justice (DOJ) and the Government Accounting Office (GAO), to maximize resources devoted to common problems. Governmentwide problems are addressed with other government agencies through the President's Council on Integrity and Efficiency (PCIE).

The OIG is divided into three components: the Office of Audit Services (OAS), the Office of Investigations (OI), and the Office of Evaluation and Inspections (OEI). The OAS is responsible for conducting audit services for HHS and overseeing audit work done by others. This component also examines the performance of HHS programs and/or its grantees and contractors in carrying out their respective responsibilities.

The OI reviews and investigates all allegations of a potentially criminal, civil, or administrative nature involving HHS programs or beneficiaries. In addition, OI is responsible for imposing administrative sanctions, including civil monetary penalties, on health care providers participating in the Medicare and Medicaid programs. Also, OI monitors the State Medicaid Fraud Control Unit (SMFCU) program, which was created to improve detection and eliminate fraud in the State run Medicaid programs.

The OEI conducts evaluations and inspections of Department programs and operations. These are usually short-term studies designed to focus on issues of current interest to Department officials or Members of Congress which highlight a program's efficiency or effectiveness. The Immediate Office of the Inspector General is responsible for setting OIG policy and direction, handling budgetary and administrative functions, reviewing and developing legislative and regulatory proposals and carrying out public affairs and Congressional Liaison responsibilities.

These audit, inspection and investigative activities focus on:

- Seeking ways to improve fiscal controls in benefit payment processes;
- Seeking ways to enhance trust fund financial management and accounting operations;
- Identifying more efficient and economical improvements in programs, procurement and service delivery, including reviews of the appropriateness of Federal payments of services provided and for the quality of care received; and
- Reducing the incidence of fraud, waste, and abuse in the Department's programs and to the Department's beneficiaries.

ACTIVITIES

Over the past 5 years the OIG has obtained over \$27.8 billion in settlements, fines, restitutions, receivables, and savings from its activities and implementation of its recommendations. In fiscal year 1990, alone, these types of savings exceeded \$5.8 billion. In addition, a total of 1,310 individuals and entities were convicted for engaging in crimes against HHS programs or beneficiaries and 900 health care providers and suppliers or their employees were administratively sanctioned in fiscal year 1990.

In addition to our audit and investigative work, the OIG, reviewed 216 Departmental draft regulations, commented on 341 legislative proposals and testified on 26 occasions before Congressional committees.

Following, under the headings, Health Care and Social Security, are examples of OIG reviews conducted in fiscal year 1990 that have substantial impact upon the elderly:

HEALTH CARE

Financed by the Federal Hospital Insurance Trust Fund, fiscal year 1990 expenditures for Medicare Part A are estimated to be in excess of \$65 billion to provide health care coverage for an estimated 34 million individuals. Medicare Part A (hos-

pital insurance) provides, through direct payment for specific use, hospital insurance protection for covered services to persons 65 or older and to certain disabled persons.

Medicare Part B (supplementary medical insurance) provides, through direct payments for specific use, insurance protection against most of the costs of health care to persons 65 or older and certain disabled persons who elect this coverage. The services covered are medically necessary physician services, outpatient hospital services, outpatient physical therapy, speech pathology services, and certain other medical and health services. Financed by participants and general revenues, fiscal year 1990 expenditures for part B are expected to exceed \$43 billion.

The financial impact of the prospective payment system on hospitals, the increases in Part B expenditures, the implementation of physician payment reforms and the Clinical Laboratory Improvement Act of 1988, medical effectiveness, and the cost implications of changes in health care technology and delivery are and will continue to be of particular interest to the OIG.

Medication Regimens: Causes of Noncompliance—The OIG conducted a study to determine the reasons many elderly people fail to follow prescription drug regimens and what the Department can do to improve compliance with drug regimens in this population group.

Research has shown that a significant proportion of elderly people do not correctly follow their physicians' instructions for taking prescription medications. Medication utilization problems may affect the health and quality of life of a sizeable number of elderly persons. These problems may also result in unnecessary health care spending. Many interrelated variables contribute to noncompliance with drug regimens. These variables fall into four main categories: Physiological factors, behavioral factors, treatment factors and health care provider/patient interaction. Researchers have found that education, based on individual patient needs, is the most effective form of intervention for noncompliant behavior.

The OIG recommended the HCFA initiate demonstration projects to determine which forms of physician, pharmacist and patient education work best to improve compliance. The PHS should promote research on medication compliance, and evaluate current programs which promote the education and training of health care practitioners on improving compliance. The Administration on Aging (AoA) should continue their educational efforts and direct some discretionary grant money to programs aimed at medication compliance problems among minority elderly groups. Both HCFA and PHS agreed with the recommendations and are pursuing a number of research and demonstration projects. The PHS is in the process of evaluating current programs and will consider modification to funding priorities in FY 1992 based on the results.

Resident Abuse in Nursing Homes—Concerns about the potential for abuse of elderly nursing home patients prompted the OIG to review State mechanisms for resolving physical abuse complaints. A companion report dealt with current practices for preventing patient abuse in nursing homes. We found that, for the most part, States do not have adequate procedures in place to resolve complaints about patient abuse. Most of the abuse that occurs is a result of inadequate training of nursing home staff. A large fraction of such abuse goes unreported, even among emergency room physicians.

The OIG recommends that the State establish integrated networks to detect, investigate, resolve and prevent abuse in nursing homes. The OIG also recommends that HCFA include stronger requirements for nursing homes to conduct rigorous follow-up procedures for reports of abuse, and include these requirements in the conditions of participation for hospitals and nursing homes. The OIG report further recommends that the Administration on Aging work jointly with HCFA to develop data collection and reporting methods necessary to adequately understand the incidence and trends associated with patient abuse in nursing homes.

Intraocular Lens Costs—In a continuing effort to assure that the Medicare program remains a prudent purchaser of services and, at the same time, provides high quality care to Medicare's elderly beneficiaries, the OIG released two reports in fiscal year 1990 on the potential for reducing the high costs of intraocular lenses used in cataract surgery. Over 80 percent of cataract surgeries are performed on Medicare beneficiaries. Recent regulations have placed a \$200 cap on the price the Medicare will allow for lenses associated with these surgeries.

The first report demonstrates that, within the United States, lenses are available for use in the elderly population at a cost significantly less than the current \$200 cap. We found that on the Federal Supply Schedule, the price of intraocular lenses varied from \$95 to \$198, with an average price of approximately \$150. At an allowed reimbursement rate of \$150, the Medicare program would save \$55 million annual-

ly. A second report on the price of an intraocular lens purchased in Canada showed an even lower average of \$110. Based upon this average price, Medicare could save approximately \$99 million annually over the current cap of \$200. Both reports recommend that HCFA inform U.S. hospitals and ambulatory surgical centers of effective contracting practices that can lead to reduced costs in procuring intraocular lenses.

Medicare Beneficiary Satisfaction—In the past several years, the Medicare program has undergone changes designed to maintain adequate coverage of beneficiaries, yet curb unnecessary spending. To assess awareness of these changes and satisfaction with the program in general, we conducted a survey of Medicare beneficiaries. We found that, overall, beneficiaries are satisfied with the Medicare program. Most beneficiaries are positive about the way Medicare processes their claims, and 88 percent said they are able to get information about the program when they need it.

SANCTIONS

The Medicare and Medicaid Patient and Program Protection Act provides a wide range of authorities to exclude individuals and entities from the Medicare, Medicaid, Maternal and Child Health, and Block Grants to States for Social Service programs. Exclusions can be made for conviction of fraud by a private health insurer, obstruction of an investigation, controlled substance abuse, and revocation or surrender of a health care license. Exclusion is mandatory for those convicted of program-related crimes or patient abuse.

With health care providers, program exclusions tend to be more effective than criminal prosecutions as deterrents to fraud and abuse. Exclusions from the Medicare program for a number of years, for example, can mean the loss of a physician's major source of income for that period of time. Exclusions also offer protection by preventing incompetent or abusive health care providers from treating patients covered by the Department's programs. In fiscal year 1990, the OIG imposed 900 sanctions against health care providers. Of these, 461 were for suspension or revocation of license to practice, patient abuse, or conviction for controlled substance abuse.

In addition to exclusions, the OIG has authority to assess health care providers thousands of dollars in fines and penalties for each item falsely claimed against Medicare and Medicaid. In fiscal year 1990, \$16 million was collected in civil monetary penalties under this authority.

SOCIAL SECURITY

Fifty-five years ago, the Social Security Act established a national insurance system that would be financed through payroll taxes on workers and employers and would pay benefits to workers in their old age. The National Retirement Survivors and Disability Insurance (RSDI) program, popularly called Social Security, is the largest of the Social Security Administration (SSA) programs. In fiscal year 1990, SSA will pay almost \$243 billion in these benefits to 39 million beneficiaries. The program is financed almost entirely through payroll taxes paid by employees, their employers and the self-employed. Benefits are distributed to retired and disabled workers, spouses, certain divorced spouses, children and disabled children of retired and disabled workers. Benefits are also provided to widows and widowers, certain surviving divorced spouses, children and dependent parents of deceased worker beneficiaries.

The Supplemental Security Income (SSI) program is a federally administered, means-tested assistance program that provides a nationally uniform, federally funded floor of income for the aged, blind and disabled. Beginning January 1974, SSI replaced State and county-run assistance programs for the aged, blind and disabled that were funded by a mix of Federal and State money. Federalization of assistance for these categories permitted the establishment of uniform eligibility criteria. In fiscal year 1990 SSA will pay SSI benefits in excess of \$11 billion.

Availability of Representative Payees—Due to Congressional concerns about the Social Security Administration's (SSA) representative payee process and pending litigation, the SSA requested that the Office of Inspector General (OIG) examine and describe the current availability of representative payees. We found that 25 percent of SSI and 3 percent of RSDI beneficiaries require representative payees. While most payees are relatives or institutions, 250,000 beneficiaries in each program must rely on other payees, such as State agencies, board and care facilities, and nonrelated individuals. We also found that most beneficiaries who require payees have them. Only 0.6 percent of SSI and 0.2 percent of RSDI beneficiary benefits are suspended because a payee cannot be found. Beneficiaries who require payees are concentrated

in a limited number of geographical areas. The OIG recommended that SSA and the Assistant Secretary for Planning and Evaluation (ASPE) identify successful payee programs and promote them in specific geographic areas. SSA agreed and is taking action to implement the recommendation.

Public attention is periodically drawn to incidents of representative payees' abusing persons receiving SSA benefits or misusing the funds intended for these persons. Since representative payees are selected to serve those who are unable to care for themselves for reasons of physical conditions or age, such abuses are doubly heinous. During fiscal year 1990, a woman and her ex-husband were convicted of murdering the woman's young brother, for whom she was representative payee, for his SSA benefits. Another payee is under indictment for murdering or causing the death of beneficiaries with intent to convert the use of their benefits. Still others have kept funds for themselves while maintaining recipients in substandard personal care and boarding homes.

The OIG has obtained several successful prosecutions by following up on the results of an SSA centenarian project. The project involved contacting 100-year-old beneficiaries to determine whether they were alive and well enough to receive direct payments. The OIG investigated cases in which the beneficiary could not be located. In addition, the OIG seeks methods of prevention of program fraud and beneficiary abuse by representative payees. In FY 1990, OIG began sending the SSA lists of persons convicted for violating related provisions of the Social Security Act, to prevent their being approved to serve as representative payees.

Payment for Vocational Rehabilitation—The Assistant Secretary for Planning and Evaluation asked the OIG to determine if SSA payments to State vocational rehabilitation agencies increased the number of disabled beneficiaries who are rehabilitated. Overall, we found that data from the sample States indicated an upward trend toward participation of SSA beneficiaries in rehabilitation. However, little evidence exists that the SSA payments for vocational rehabilitation are inducing States to increase the number of SSA beneficiaries they serve. This is partially due to the cumbersome process for filing claims and the lack of timeliness in payment from SSA. Options were recommended to strengthen the linkage between the payments and State actions to rehabilitate SSA beneficiaries and to reduce the disincentives for rehabilitation. SSA agreed and is taking steps to implement some of the proposed options.

Board and Care—The OIG conducted a survey between April and August 1989 to assess existing State board and care regulations and enforcement activity. The review revealed that State standards adequately address certain basic safety and service requirements, but weaknesses exist in other important areas, such as level of care, training, unlicensed facilities, complaints, and coordination. We also found that while States conduct basic enforcement activities, serious weaknesses exist. The Department currently plays a limited role in board and care and little coordination exists. The report recommends that States reevaluate their board and care standards; improve their ability to identify and deal with unlicensed facilities; make use of sanctions such as civil monetary penalties, restrictions on new admissions, and closing of homes; and assure that their procedures for resolving complaints are sufficiently publicized. We also recommend that the Assistant Secretary for Planning and Evaluation designate a unit to coordinate activities, disseminate information, and provide technical assistance to States relating to board and care.

Cost-Sharing for Older Americans—The Commissioner on Aging requested that the OIG conduct a study which would examine State experiences with cost-sharing for State programs similar to those funded under title III of the Older Americans Act. Currently, Federal law precludes State and area Agencies on Aging from charging fees for title III services, although States and local providers may charge fees for services funded solely by the State. About 40 percent of States have cost-sharing for some State-funded programs, and income-related sliding fee scales are generally used to set fees.

The OIG found that cost-sharing recipients consider cost-sharing fair and appropriate, and report that the services they are receiving are worth what they pay for them. Officials in States with cost-sharing programs are strongly supportive of the idea of extending cost-sharing to title III, as are officials in States without this experience.

OFFICE OF THE SURGEON GENERAL—ACTIVITIES IN AGING, FISCAL YEAR 1990

In fiscal year 1990, the Office of the Surgeon General released the report "The Health Benefits of Smoking Cessation on September 25, 1990. In this report, it was

noted that smoking cessation has major and immediate health benefits for men and women of all ages, even those in older age groups. Benefits apply to healthy people and to those already suffering from smoking-related diseases, and represents the single most important step that smokers can take to enhance the length and quality of their lives.

Additionally, in coordination with the Centers for Disease Control and the American Association of Retired Persons, the Surgeon General participated in the campaign "It's Never Too Late To Quit," a public service campaign targeted at motivating older smokers to quit. This campaign will strive to make smoking cessation by older smokers a priority issue for concerned national, State, and local agencies and organizations, as well as to increase the social support available to older smokers who would like to quit.

FAMILY SUPPORT ADMINISTRATION

LOW INCOME HOME ENERGY ASSISTANCE PROGRAM

The Low Income Home Energy Assistance Program (LIHEAP) is one of six block grant programs administered within the Department of Health and Human Services (HHS). LIHEAP is administered by the Office of Community Services (OCS) in the Family Support Administration.

LIHEAP helps low income households meet the cost of home energy. The program is authorized by the Omnibus Budget Reconciliation Act of 1981, as amended most recently by the Augustus F. Hawkins Human Services Reauthorization Act of 1990. In fiscal year 1989 Congress appropriated \$1,383 billion for the program. Congress appropriated \$1,443 billion for LIHEAP in fiscal year 1990. In fiscal year 1991, Congress appropriated \$1,415 billion plus a contingency fund of \$195 million which will go into effect if fuel oil prices are above a certain level.

Block grants are made to States, territories, and eligible applicant Indian Tribes. Grantees may provide heating assistance, cooling assistance, energy crisis intervention, and low-cost residential weatherization or other energy-related home repair to eligible households. Grantees can make payments to households with incomes not exceeding the greater of 150 percent of the poverty level, or 60 percent of the State's median income.¹ Most households in which one or more persons are receiving Aid to Families with Dependent Children, Supplemental Security Income, Food Stamps or need-tested veterans' benefits may be regarded as categorically eligible for LIHEAP.

Low income elderly households are a major target group for energy assistance. They spend, on average, a greater portion of their income for heating costs than other low income households. Grantees are required to target outreach activities to elderly or handicapped households eligible for energy assistance. In their crisis intervention programs, grantees must provide physically infirm individuals the means to apply for assistance without leaving their homes, or the means to travel to sites where applications are accepted.

In fiscal year 1990, about 41 percent of households receiving assistance with heating costs included at least one person age 60 or over, as estimated by the March 1990 Current Population Survey.

OCS is a member of the National Energy and Aging Consortium, which focuses on helping older Americans cope with the impact of high energy costs and related energy concerns.

No major program and policy changes for the elderly occurred in the 1990 reauthorization legislation. No new initiatives commenced in 1990 or are planned for 1991 that would impact on the status of older Americans.

THE COMMUNITY SERVICES BLOCK GRANT (CSBG) AND THE ELDERLY

I. Community Services Block Grant.—The Community Services Block Grant Act (Subtitle B, P.L. 97-35 as amended) is authorized through fiscal year 1994. The Act authorizes the Secretary, through the Office of Community Services (OCS), an office within the Family Support Administration in the Department of Health and Human Services, to make grants to States and Indian tribes or tribal organizations. States and tribes have the authority and the flexibility to make decisions about the kinds of local projects to be supported by the State or tribe, using CSBG funds. The purposes of the CSBG program are:

¹ Beginning with fiscal year 1986, States are prohibited from setting income eligibility levels lower than 110 percent of the poverty level.

(A) to provide a range of services and activities having a measurable and potentially major impact on causes of poverty in the community or those areas of the community where poverty is a particularly acute problem.

(B) to provide activities designed to assist low income participants including the elderly poor—

- (i) to secure and retain meaningful employment;
- (ii) to attain an adequate education;
- (iii) to make better use of available income;
- (iv) to obtain and maintain adequate housing and a suitable living environment;
- (v) to obtain emergency assistance through loans or grants to meet immediate and urgent individual and family needs, including the need for health services, nutritious food, housing, and employment-related assistance;
- (vi) to remove obstacles and solve problems which block the achievement of self-sufficiency;
- (vii) to achieve greater participation in the affairs of the community; and
- (viii) to make more effective use of other programs related to the purposes of the subtitle;

(C) to provide on an emergency basis for the provision of such supplies and services, nutritious foodstuffs and related services, as may be necessary to counteract conditions of starvation and malnutrition among the poor;

(D) to coordinate and establish linkages between governmental and other social services programs to assure the effective delivery of such services to low income individuals; and

(E) to encourage the use of entities in the private sector of the community in efforts to ameliorate poverty in the community; (Reference Section 675(c)(1) of P.L. 97-35 as amended).

It should be noted that although there is a specific reference to "elderly poor" in (B) above, there is no requirement that the States or tribes place emphasis on the elderly or set aside funds to be specifically targeted on the elderly. Neither the statute nor implementing regulations include a requirement that grant recipients report on the kinds of activities paid for from CSBG funds or the types of indigent clients served. Hence, it is not possible for OCS to provide complete information on the amount of CSBG funds spent on the elderly, or the number of elderly, or the numbers of elderly persons served.

II. Major Activities or Research Projects Related to Older Citizens in 1990 and 1991.—The Office of Community Services made no major changes in program or policy related to the CSBG program in 1990. No research projects were conducted in 1990 and none is planned for 1991.

The Human Services Reauthorization Act of 1986 (which reauthorized CSBG) contained the following language: "each such evaluation shall include identifying the impact that assistance . . . has on . . . the elderly poor."

The collection of impact data activity required by this language will begin in fiscal year 1991.

III. Funding Levels.—Funding levels under the CSBG program for States and Indian Tribes or tribal organizations amounted to \$322,089,910 in fiscal year 1990. In fiscal year 1991, \$349,372,000 was appropriated.

OFFICE OF THE ASSISTANT SECRETARY FOR PLANNING AND EVALUATION

The Office of the Assistant Secretary for Planning and Evaluation (ASPE) serves as the principal advisor to the Secretary on policy development and/or management decisions for all population groups served by the Department, including the elderly. The long-range goal of policy research in this office is to provide factual information for use by departmental decision-makers in the development of new policies and the modification of existing programs. This office is responsible for legislative development, planning, policy analysis and research and evaluation oversight.

ASPE is involved in a broad range of activities related to aging policies and programs. Specific grants and contracts which include the elderly as a major focus are listed individually in this report. In addition, there are a number of research, evaluation and coordination activities which integrate aging concerns with those of other population groups. For example, the elderly are included in studies of health care delivery, poverty, State-Federal relations and public and private social service programs.

ASPE also maintains a national clearinghouse which includes aging research and evaluation materials. The ASPE Policy Information Center (PIC) provides a centralized source of information on evaluative research relevant to the Department's programs and policies. On-going and completed HHS evaluations are tracked, compiled and retrieved. In addition, the PIC database includes ASPE policy research, the Inspector General's program inspections and reports from the General Accounting Office, Congressional Budget Office and Office of Technology Assessment of relevance to the Department. Research studies of a short-term evaluative nature conducted by the Department were recently added. Copies of final reports of the studies described in this statement are available upon completion from PIC.

During 1990, staff of the Office of the Assistant Secretary for Planning and Evaluation undertook or participated in the following analytic and research activities which had a major focus on the elderly:

1. Policy Development

Long Term Care and the Uninsured

ASPE continues to play a major role in analyzing long-term care issues which cut across the major divisions of the Department. In 1990 ASPE provided key staff support to the Under Secretary's Task Force on Access to Care. The Under Secretary has been charged with conducting a thorough review of present policies on long-term care and health care for the uninsured and underinsured, how well these policies are working on behalf of persons who need care, and how well they may serve us in the future. The review will evaluate potential participation and costs under a broad range of financing options and is intended to contribute to the development of a set of basic goals for health care reform as well as specific policy proposal.

A report is due in April 1991.

Aging

Task Force on Elder Abuse

ASPE and the Administration on Aging (AoA) chair the Secretary's Task Force on Elder Abuse that includes the Health Care Financing Administration, the Public Health Service and the Social Security Administration. The purpose of the Task Force is to develop a Departmental strategy to promote the prevention and improved reporting, investigation and follow-up of elder abuse. The Task Force will develop both short-term and long-term strategies for recommendation to the Secretary.

Task Force on Alzheimer's Disease

As a member of the DHHS Council on Alzheimer's Disease, ASPE assisted in preparation of the annual report to the Congress on selected aspects of caring for persons with Alzheimer's disease. The report focused on the Department's current and planned services research initiatives on Alzheimer's Disease.

Federal Interagency Forum On Aging-Related Statistics

ASPE is a member of the Federal Interagency Forum on Aging-Related Statistics (The Forum). The Forum was established to encourage the development, collection, analysis, and dissemination of data on the older population. The Forum seeks to extend the use of limited resources among agencies through joint problem solving, identification of data gaps and improvement of the statistical information bases on the older population that is used to set the priorities of the work of individual agencies.

Departmental Data Planning And Analysis Working Group

The Data Planning and Analysis Working Group chaired by ASPE analyzes Departmental data requirements and develops plans minimizing barriers to full utilization of such data. The Group identifies needs for data within HHS, evaluates the capacity of current systems to meet these needs and prepares recommendations for ensuring effective and efficient performance of HHS data systems.

Long-Term Care Microsimulation Model

During 1990 ASPE made extensive use of the Long-Term Care Financing Model developed by ICF, Inc. and the Brookings Institute. The model simulates the utilization and financing of nursing home and home care services by a nationally representative sample of elderly persons for the period 1986 to 2020. It gives the Department the capacity to simulate the effects of various financing and organizational reform options on future public and private expenditures for nursing home and home care services. Work has now begun on making the model available to the general research community.

2. Research and Demonstration Projects

INSTITUTE FOR RESEARCH ON POVERTY UNIVERSITY OF WISCONSIN

Charles F. Manski, Principal Investigator.

A research agenda of diverse but interrelated two-year studies concerned with the relationships between poverty and family structure, labor force behavior, and welfare dependence. In the 1989-1191 biennium there are no projects dealing exclusively with the elderly. However, the Institute does do a number of activities and publishes a number of materials on poverty which include the elderly as an important subgroup.

Funding: Fiscal years 1989-1991 --\$3,000,000
End Date: June 1991

PANEL STUDY OF INCOME DYNAMICS

University of Michigan, Institute for Social Research
James N. Morgan, Greg J. Duncan, and Martha S. Hill,
Principal Investigators

Through an interagency consortium coordinated by the National Science Foundation (NSF contributes approximately \$1.5 million per year), ASPE assists in the funding of the Panel Study of Income Dynamics (PSID). This is an ongoing nationally representative longitudinal survey that began in 1968 under the auspices of the Office of Economic Opportunity. The PSID has gathered information on family composition, attitudes, employment, sources of income, housing, mobility, and a host of other subjects every year since then on a sample of approximately 5,000 families and has followed all original sample members that have left home. The current sample size is over 7,000 families. The data files have been disseminated widely and are used by hundreds of researchers both within this country and in numerous foreign countries to get an accurate picture of changes in the well-being of different demographic groups including the elderly.

Funding: ASPE (and HHS precursors) - FY67 through FY79 - \$10,559,498; FY80 - \$698,952; FY81 - \$600,000; FY82 - \$200,000; FY93 - \$250,999; FY84 - \$550,000; FY85 - \$300,000; FY86 - \$225,000; FY87 - \$250,000; FY88 - \$250,000; FY89 - \$250,000; FY90 - \$300,000

SURVEY OF CONSUMER FINANCES

University of Michigan, Survey Research Center
Richard Curtin, Principal Investigator

The Survey of Consumer Finances interviewed a representative sample of U.S. families in the Spring of 1983 gathering a detailed accounting of family assets and liabilities; questioning also covered financial behavior and attitudes, work status, job history, and expected benefits from pensions and Social Security. A supplemental instrument gathered information on the pension entitlement of individuals in the sample. Detailed descriptions of pension plans are being linked to household files.

Data from the survey are expected to be widely used for investigation of the distribution of holdings of various assets and liabilities, of net worth, and of entitlement to pension and Social Security benefits.

In addition, these data will support research on financial behavior of individuals and on the effect of Social Security and pensions on the holdings of other assets.

The survey was jointly sponsored by the Board of Governors of the Federal Reserve System, the Department of Health and Human Services, the Department of the Treasury, the Federal Deposit Insurance Corporation, the Federal Trade Commission, and the Department of Labor.

The Survey Research Center completed the second wave of the survey. Follow-up telephone interviews with respondents from the first survey were conducted updating basic information from the original wave and adding new areas of questioning. Data from this wave will be available Winter 1988. A third in-person wave will be conducted in 1989 to obtain another household balance sheet for those in the original sample, supplemented by an additional sample of households.

Funding: ASPE - \$1,012,096; TOTAL - \$1,711,983
Funding by FY: 82 - \$750,000; 83 - \$132,096; 84 - \$130,000; 89 - \$50,000; 90 - \$50,000

RESEARCH TO IMPROVE THE ACCURACY OF LONG TERM FORECASTS OF THE SOCIAL SECURITY AND MEDICARE TRUST FUNDS

Unicon Research Corporation
Finis Welch and Kevin Murphy, Principal Investigators.

The research consists of two related projects. The first will estimate historical real wage growth using household data for the Current Population Survey for the period 1964 and 1987 and forecast future growth. The goal is to decompose past wage growth into growth in the wages of workers with fixed characteristics and changes in aggregate wage levels generated by changes in the composition of hours worked. The project will also forecast the future distribution of workers across groups (distinguished by sex, race, age, education and labor force status) which will be combined with estimated relative wage patterns to forecast the composition component of future wage growth.

The second project extends the analysis to evaluate the impact of changes in the relative earnings of husbands and wives on the solvency of the social security system. The goal is to provide estimates of the tax contributions and benefit payments of women eligible for both primary and spouse benefits. Although preliminary work indicates that increases in earnings and labor force participation of women will contribute to the solvency of the social security trust fund, the magnitude depends on how the increased earnings are distributed among those already working and previous non-participants.

Funding: FY 1989 \$87,600
End Date: December 1990

PENSIONS, SAVINGS, HEALTH EXPENDITURES, LONG-TERM CARE, AND RETIREMENT

1. "Retiree Health Insurance: A Research Proposal."

National Bureau of Economic Research
Principal Investigators: Alan L. Gustman and
Thomas L. Steinmeier

The researchers will use several data sets to estimate the change in the value of health insurance resulting from retirement. Using these estimates the investigators will expand their previous work on the effects of pensions and social security on retirement to include the effect of retiree health benefits on the retirement decision.

Funding FY 1990 \$89,827
End Date: September 1991

2. "Retiree Health Benefits and the Retirement Decision."

North Carolina State University
Principal Investigators: Robert L. Clark and Alvin
E. Headen, Jr.

The researchers will use data from the 1988 Employee Benefits Survey and the 1988 Current Population Survey to examine the decision of employers to provide retiree health insurance and pensions plans. They will explore the potential tradeoffs between the two fringe benefits. An economic model of why workers and firms negotiate retiree health care plans will be developed and used in the derivation and analysis of employer-sponsored retiree health insurance coverage rates for retirees and for older active workers by various worker and firm characteristics.

Funding FY 1990 - \$77,429
End Date: September 1991

3. "Retiree Health Benefits: An Analysis of Access and Participation"

The Urban Institute
Principal Investigator: Shiela Zledewski

The researchers will use the August 1988 Current Population Survey to examine the distribution of employer-based retiree health insurance benefits (by occupation, income, health, location, family status etc.) and examine the determinants of retiree

participation in employer-based plans. The project will also estimate the value of the employer-provided health benefits and examine their effect on retirement income security and government programs.

Funding FY 1990 - \$120,395
End Date: September 1991

POLICY ASPECTS OF INTERGENERATIONAL SUPPORT FOR ELDERLY PERSONS.

Brown University
Principal Investigator: Alden Speare, Jr..

The researchers will study the determinants of financial flows between elderly persons and children outside the household, determine the extent to which shared living helps the elderly avoid poverty, and examine how intergenerational transfers are affected by government policy. The investigators will use the Survey of Income and Program Participation and the Survey of Consumer Finances.

Funding FY 1990 - \$63,426
End Date: September 1991

CHARACTERISTICS OF THE ELDERLY LONG-TERM CARE POPULATION AND ITS SERVICE USE

Duke University, Center for Demographic Studies
Ken Manton, Principal Investigator

The project is organized into two phases. In the first year there will be an analysis of the 1982-84 National Long-Term Care Survey and the National Long-Term Care Channeling Demonstration data sets. The focus will be on functional transitions at advanced ages and the impacts of long-term care services on these transitions. In the second phase, additional national data bases like the Longitudinal Supplement on Aging will be examined to refine and extend the understanding of health and functional status changes among the impaired elderly as well as trends in service use.

Funding: FY 1987 \$56,933
End Date: December 1990

1988 NATIONAL LONG-TERM CARE SURVEY - ADDITIONAL ACTIVITIES

Duke University, Center for Demographic Studies
Ken Manton, Principal Investigator

Under a grant from the National Institute on Aging (NIA), Duke University (through the Census Bureau) is conducting the 1988 National Long-Term Care Survey. Duke will produce a data file consisting of the 1982, 1984 and 1988 surveys linked to Medicare bill records. An additional grant jointly administered by NIA and the Office of the Assistant Secretary for Planning and Evaluation will support three supplementary activities: (a) a survey of informal caregivers (b) a follow-back survey of institutionalized persons and (c) an analysis of the effects of supply factors on respondent use of services.

Funding: FY 1987 \$300,000
End Date: December 1990

PREMIUM PRICING OF PROTOTYPE PRIVATE LONG-TERM CARE INSURANCE POLICIES

Brookings Institution
Joshua Weiner, Principal Investigator

This project will make estimates of the benefits, costs and premiums for prototype long-term care policies. It will examine the sensitivity of insurance premiums to different assumptions about age of purchase, amount of coverage, inflation, and group versus individual policies. Knowing the price of various prototype insurance policies will enable public policymakers to better assess the potential market for such insurance.

Funding: FY 1988 \$100,000
End Date: December 1990

COMMUNITY PROGRAM SIZE AND QUALITY

Temple University
Developmental Disabilities Center
James Conroy, Principal Investigator

This project focuses on the relationship between community residential setting size and quality of care for persons with developmental disabilities. It will develop information that will help state planners understand the advantages and disadvantages of residential settings of various bed capacities. The Pennhurst Longitudinal data base will be analyzed using the size issue as the central problem to be investigated.

Funding: FY 1988 \$25,324.00
End Date: December 1990

ANALYSIS AND COMPARISON OF STATE BOARD AND CARE REGULATIONS AND THEIR EFFECTS ON THE QUALITY OF CARE IN BOARD AND CARE HOMES

Research Triangle Institute
Catherine Hawes, Principal Investigator

As the nation's long-term care system evolves, more emphasis is being placed on home and community-based care as an alternative to institutional care. Community-based living arrangements for dependent populations (disabled elderly, mentally ill, persons with mental retardation/developmental disabilities) play a major role in the continuum of long-term care and disability-related services. Prominent among these arrangements are board and care homes.

There is a widespread perception in the Congress and elsewhere that too often board and care home residents are the victims of unsafe and unsanitary living conditions, abuse and neglect by operators, and fraud. There is also the perception that an increasing number of board and care residents are so disabled that they require a level of care greater than board and care operators are able to provide.

This project will analyze the impact of State regulations on the quality of care in board and care homes and document characteristics of board and care facilities, their owners and operators, and collect information on the health status, level of dependency, program participation and service needs of residents.

Funding: FY 1989 \$350,000; FY 1990 \$300,000
End Date: September 1991

POST-ACUTE CARE FOR MEDICARE PATIENTS

University of Minnesota
Robert Kane, Principal Investigator

The primary objective of this study is to describe the "natural history" of care received by patients with five different impairments (identified by DRG) in three post-acute care modalities. These modalities include home health care, skilled nursing care, and rehabilitation. This study will not only provide a history of what care was delivered in which settings, but will also assess and compare outcomes and costs of care across settings and impairments. In addition, the study will determine the factors that influence hospital discharge decision-making. This study's findings may then be used to construct a revised payment method for post-acute care in the Medicare program.

Two sets of data will be collected. The first set will contain information from hospital discharge records and pre and post discharge client interviews in three U.S. cities. The second set will include a 20% national sample of Medicare acute care discharges to be linked with the utilization files of Medicare covered services provided in post-acute care settings. Data collection has been completed, and the analysis phase is currently underway.

Funding: FY 1987 \$500,000
FY 1988 \$727,000
FY 1989 \$695,335
End Date: March 1991

EVALUATION OF AN APPROACH TO MAINTAINING THE MEDICAL CURRENCY OF RURAL PHYSICIANS AND HOSPITALS

Texas Tech
A. Bryan Spives, MD

OBRA '87 required the Department to explore and to test the feasibility of "requiring instructions and oversight of rural physicians ... through use of video communications between rural hospitals and teaching hospitals" to maintain and improve the quality of delivered medical care, with special emphasis on Medicare beneficiaries." This activity is to be supported jointly by HCFA and PHS, with ASPE responsible for support of necessary evaluation activities. This project will support the evaluation component.

A two-part, three year effort, totalling \$350 thousand in evaluation, is envisioned. The first component, internal evaluation, will be supported through partial funding of the OBRA '87-required project(s). The second component, external evaluation, will be supported through consortium funding by PHS, HCFA, and ASPE of an independent evaluation contract.

Funding: FY 1991 \$125,000
FY 1992 \$125,000
End Date: June 1993

EXTENSION OF 100% STATE LONGITUDINAL MEDICARE PART B DATA TO 1988

The Circle, Inc.
Howard West, Principal Investigator

ASPE has collected 100% Part B data from six carriers representing ten states beginning in 1983. The states included are Washington, South Carolina, North Dakota, South Dakota, Minnesota, Indiana, Pennsylvania, Washington D.C., Delaware, and parts of Maryland. The data are cleaned in a common format and can be linked to 100% Part A MEDPAR data to create analytical files that contain both hospital and physician reimbursement. The data can support detailed analysis of individual procedures and can support analyses of such issues as physician DRG's; the effects of bundling diagnostic procedures prior to the hospital stay into the DRG payment and others. The project adds 1988 data for all carriers to the longitudinal data series.

Funding: Fiscal Year 1990--\$75,000
End Date: December 1990

ASSESSMENT OF THE EFFECTS OF REIMBURSEMENT POLICY ON THE UTILIZATION OF CLINICAL LABORATORY TESTING AND THE CONTRIBUTION OF THAT TESTING IN PATIENT CARE

Abt Associates
Steven T. Mennemeyer, Ph.D., Principal Investigator

This research project is designed to study the effect of reimbursement policies on the volume of clinical laboratory services delivered and on the propensity of physicians to perform testing in their own offices. In addition, this research project is intended to

stimulate the development of methods for monitoring laboratory performance in terms of patient care. At present the effects of reimbursement policy on laboratory utilization and the role of these laboratory services in the quality of patient care is poorly understood. There is widespread concern generated by media coverage and anecdotal evidence that the utilization of clinical laboratory services is not meeting patient needs during a period in which laboratory technology has improved dramatically. Addressing some of these concerns, Congress passed the "Clinical Laboratory Improvement Amendments of 1988" (CLIA-88). Although financial issues such as physician ownership of labs and direct payment were much debated, Congress did not act on these financial matters in the final bill. An assessment of data concerning the utilization of laboratory services is necessary for policy makers to identify strategies that best promote advances in laboratory services in order to enhance patient care and maximize the effectiveness of health care expenditures.

Funding: Fiscal year: 1889 -- \$510,000
End Date: June 1991

ANALYSIS OF MULTIPLE SURGICAL BILLS ON THE DAY OF SURGERY

Center for Health Economics Research
Janet Mitchell, Principal Investigator

Medicare statistical files (BMAD) data for 1985-1988 will be examined to identify patients who have received bills for more than one surgery on the same day for 15 or more high Medicare outlay surgical procedures. The contractor will first eliminate duplicate claims. The remaining claims will be sorted into three types with the aid of a medical consultant: (1) claims by the same surgeon for procedures made through the same incisions the principal procedure which are properly paid but at a reduced rate (50%); (2) claims by the same surgeon for related procedures to the principal procedure which under the carrier's global fee policy should not have been billed separately (e.g., billing both for a hysterectomy and sewing up the wound); (3) claims by a different surgeon for a related procedure which could have been billed as an assistant-at-surgery claim; and (4) a second procedure through a separate incision. Estimates will be made based on this topology, and with the aid of medical advice as to when billing patterns appear inappropriate of Medicare overpayments for both potential overbillings or apparent "unbundling" from surgical global fees.

Funding: Fiscal year 1990--\$90,000
End Date: June 1991

ASSESSMENT OF ACCESS TO CARE IN RURAL AREAS SERVED BY ISOLATED RURAL HOSPITALS

Lewin/ICF
Kathy Jones, Project Director

This study analyzes the number and character of communities served by isolated rural hospitals, their current patterns of care, and the financial circumstances of the hospitals that serve them. Medicare discharge and cost report data from 1984 and 1988 are used to assess patterns of care and the financial status of isolated rural hospitals. The study will examine the extent to which patients received services at the local hospital compared to more distant facilities during 1984 and 1988.

Funding: Fiscal Year 1990 \$120,000
End Date: January 1991.

PUBLIC HEALTH SERVICE—CENTERS FOR DISEASE CONTROL (CDC)

CENTER FOR CHRONIC DISEASE PREVENTION AND HEALTH PROMOTION

The Combined Health Information Database (CHID) is a composite database that contains the health information collection of 17 Federal information centers and clearinghouses. CHID contains information on arthritis and musculoskeletal disease, diabetes, cholesterol, high blood pressure, digestive disease, injury prevention, kidney, and urologic diseases, eye diseases, and Alzheimer's disease. Because of the nature of the subject areas, CHID is a valuable resource for health providers working with the elderly. CHID can be accessed through most library and information services. Persons who wish to access the database directly can obtain a password for MAXWELL ONLINE, BRS Division, Latham, NY, 1-800-345-4BRS.

The Planned Approach to Community Health (PATCH) program continues to provide technical assistance to State and local health agencies. The program provides an epidemiologic framework for diagnosing community needs and implementing targeted interventions to reduce risk factors associated with the leading causes of death and disability. At the present time, 21 communities are conducting interventions that could impact older Americans. These interventions vary from walking programs in Gage County, Nebraska to cholesterol screening and education projects in Doddridge County, West Virginia.

Additionally, the Center implemented the 1990 Secretary's Community Health Promotion Awards Program which provided national recognition to 28 programs addressing the needs of the elderly.

Through the Community Chronic Disease Prevention Program, CDC had provided assistance to 21 State health departments to build their capacity for designing, organizing, implementing, and evaluating behavior-based intervention activities in specific communities.

The Centers for Disease Control (CDC) actively participates in the ongoing activities of the Interagency Forum on Aging-Related Statistics co-sponsored by the Bureau of the Census, The National Institute on Aging, and the National Center for Health Statistics.

Through a cooperative agreement with the University of Alabama at Birmingham, CDC is conducting a study to explore the physical activity of a lower socioeconomic population living in public housing. Over 25 percent of the target population is 55 years old or older. Data have been analyzed from the initial survey of this population and a physical activity intervention program has been started in 4 separate housing communities with 4 other communities serving as controls. The results of these studies will provide important information about what intervention strategies work best to promote physical activity within low socioeconomic elderly populations.

Through a contract with the San Diego State University, CDC is developing physician-based physical activity assessment and counseling protocols as well as provider training materials for the use of the protocols. The counseling materials include specific information about physical activity prescription for elderly patients. The development of this tool will be an important step in achieving several of the Year 2000 Objectives for Physical Activity and Fitness.

CDC has collaborated with the National Institute of Public Health and Environmental Protection of the Netherlands on the statistical analysis of the association between physical activity and coronary heart disease risk factors in elderly men, using data from the Zutphen cohort of the Seven Countries Study (SCS). Additional analyses will study the association of physical activity with health status and nutritional practices. Follow-up of that Dutch cohort in 1990 will focus on the association of physical activity with physical function and morbidity and mortality endpoints, 6-year physical activity trends, and comparisons with other cohorts of the SCS.

A variety of programs that address the health problems of elderly Americans are being conducted by the CDC-funded Prevention Center in the School of Public Health at the University of Washington. The University of Washington Prevention Center has developed and tested questionnaires to measure health risk factors, health status, and quality of life among older adults. They investigated reasons why eligible older people are non-participants in various studies. Hip fracture case-control studies also being conducted have shown that cognitive impairment, poor leg strength, hard surfaces, and unsteady shoes are additional major hip fracture risk factors. The center is conducting a large-scale demonstration project using enrollees 65 years of age or older assessing such areas as exercise, alcohol reduction, home safety checklist, prescription drug review, and help for hearing or visually impaired. The experimental interventions have reduced incidence of functional decline, restricted activity days, and falls. A variety of pilot studies have been conducted at

the center and have demonstrated tremendous benefits of smoking cessation, evaluated non-invasive measures of bone density, stimulated better oral health, linked pharmacy and health care utilization data, and linked motor vehicle records and health status information.

CDC investigators are conducting secondary analyses of the National Nutrition and Health Examination Survey Follow-up data. Specific analyses have dealt with the aging related topics of hopelessness and its effect on cardiovascular morbidity and mortality. Additional analyses deal with the incidence of stroke and issues of disability.

Although the incidence of cervical cancer has declined, in 1990 an estimated 13,500 women will develop invasive cervical cancer, and 45 percent or approximately 6,000 deaths will occur. The Pap test is effective in screening for cancer of the uterine cervix, reducing mortality from the disease by as much as 75 percent. While younger women are more frequently diagnosed with *in situ* cervical cancer, older women are more likely to be diagnosed with invasive cervical cancer and to die from it. A possible explanation is the rates of screening among younger and older women. Data from the National Health Interview Survey of Health Promotion and Disease Prevention in 1985 indicate that 75 percent of women had a Pap smear in the previous 3 years. However, only 50 percent of women over 65 years of age had a Pap smear in the previous 3 years; 15 percent of women over 45 years of age had never had Pap smears.

CDC has cooperative agreements with Kentucky, Illinois, Georgia, Washington State, Oklahoma, and the Navajo Indian Health Service to identify barriers to Pap smear screening, and to develop, implement, and monitor interventions designed to reduce the mortality due to cervical cancer. Interventions designed by these cooperative agreements have been targeted to older women to improve the proportion who receive regular Pap smear screening.

Breast cancer is the major cause of cancer deaths in women and has been increasing one percent per year from 1975 to 1984. In 1990, an estimated 44,000 women will die of breast cancer, while 150,000 new cases will be diagnosed. The incidence of breast cancer increases dramatically with age. Among women under the age of 50 the incidence rate in 1987 was 34.4 per 100,000 as compared to a rate of 351.1 per 100,000 for women 50 years of age or older. Research indicates that mortality due to breast cancer can be reduced by 30 percent among women aged 50 and older through the use of mammographic screening and clinical breast examination. In 1989, consensus guidelines recommend the screening process to begin by age 40, and consist of annual clinical breast examination and mammography at 1 to 2 year intervals.

For women, aged 50 and older, clinical breast examination and mammography are recommended each year. In the 1987 National Health Interview Survey, only 25 percent of women aged 50 and older reported having had a mammogram within the preceding 2 years, with a decrease to 18 percent for women aged 70 and older. CDC has cooperative agreements with Rhode Island to evaluate their breast cancer screening program, which promotes low-cost screening mammograms for women over 50 years of age; Maine to develop a comprehensive screening program that includes quality assurance and education for women and medical care providers; Colorado to develop a computerized system to ensure women receive regular screening mammograms and prompt diagnosis and treatment after abnormal mammograms; and California to implement and evaluate a mammography demonstration project that includes patient and provider education programs targeted to minority and medically underserved populations.

A new effort aimed at reducing the mortality from breast and cervical cancer was initiated in fiscal year 1990 and continued in fiscal year 1991 under authorization from Public Law 101-354. Cooperative agreements were awarded to South Carolina, West Virginia, Minnesota, and Colorado in fiscal year 1990 to begin planning efforts for a comprehensive program which will include payment for screening and follow-up services for women that are unable to identify other payment sources. Each of these projects will include an emphasis on reaching the elderly.

Musculoskeletal diseases are the most prevalent chronic diseases, affecting approximately 37 million persons (15 percent) in the United States. From the first National Health and Nutrition Examination Survey, 40 percent of persons 65 years or older have symptomatic musculoskeletal disease and 60 percent have clinical evidence of disease.

The 1987 National Health Interview Survey data were used to determine estimates of the prevalence of arthritic conditions for each State. Data from the National Medicare Hospitalization, the First National Health and Nutrition Examination Survey, and the National Hospital Discharge Survey showed an unexpected black-

to-white racial difference in the use of the total knee arthroplasty for osteoarthritis in the elderly. A prospective cohort study of osteoarthritis of the hip and knee has been started to determine incidence and prevalence rates and to identify important modifiable risk factors that initiate and promote the disease and its associated disability. National Medicare Hospitalization Data and the 1985 National Fluoridation Census related the hip fracture Hospitalization Rate directly to the content of drinking water. Medicare hospitalization data showed an unexpected north-to-south gradient in hip fracture hospitalization rates. Swedish data showed that the incidence of first hip fracture is no lower in breast cancer patients, who are assumed to have higher levels of endogenous estrogens, than in other women.

Chronic neurological diseases, conditions common among the elderly, rank high in terms of morbidity, disability, family stress, and economic burden. For example, the costs due to dementias alone are estimated to be \$30 billion annually and will increase rapidly as the number of elderly in the population grows. However, because the epidemiology of these conditions is poorly understood, CDC has begun analyzing existing data sets and exploring the value of gathering new data on these conditions and their associated problems. National Center for Health Statistics' multiple cause-of-death files have been used to estimate mortality rates from Alzheimer's disease, Parkinson's disease, amyotrophic lateral sclerosis, and multiple sclerosis from 1958 through 1987 and to examine the epidemiology of these diseases. According to these data, annual age-adjusted mortality rates from Alzheimer's disease increased from 0.4 to 4.2 deaths per 100,000 from 1979 through 1987. It is not yet known how much of this increase was caused by rising disease incidence as opposed to increased awareness and diagnosis of Alzheimer's disease. Medicare hospitalization data were examined for information on dementing illnesses but were found to be a poor source of data on these conditions.

Diabetes is also a major contributor to morbidity and mortality among persons over 65. It affects 8 percent of persons over 65, 60 percent of those individuals are hospitalized every year. In black populations, one of four women over the age of 75 has diabetes. One quarter of all patients initiating costly end-stage renal disease treatment have diabetes, and 20 percent are over 65. Half of all amputations occur in people with diabetes, and 60 percent of those are over 65 years old. Almost half of the persons with diabetes who become blind are over 65. For diabetic persons over the age of 65, direct costs are \$5.16 billion annually, with 80 percent attributed to hospital costs. During 1990, CDC focused its efforts on the prevention of three major complications of diabetes which affect people over 65: blindness, amputations, and cardiovascular disease. Twenty-six States and one territory were provided funding to address these complications. Increased emphasis on these conditions will continue in fiscal year 1991. Attention to the major contributions of cardiovascular disease, which accounts for 75 percent of all deaths among persons with diabetes over 65, will expand in 1991. The program continues to build consensus on effect control strategies and translating effective techniques into community practice. In addition, increased efforts will be directed to disability and quality of life issues relevant to diabetes.

CENTER FOR ENVIRONMENTAL HEALTH AND INJURY CONTROL (CEHIC)

Several CDC Injury Research and Demonstration Grants have focused on injury prevention in the elderly. In 1986, CDC began funding a 3-year project at the Vanderbilt University School of Medicine to study the relationship between psychotropic and hypotensive drugs and the risk of fall-related fractures among Tennessee Medicare enrollees. The investigators have identified potential interventions for fall-related fractures by changing patterns of medication use. In 1989, CDC funded a study aimed at identifying therapeutic interventions for improving outcomes in elderly burn patients and another study that will provide a model for assessing medication-associated crash risks in the elderly. In August 1989, a multi-disciplinary conference addressing the needs of the older driver was hosted by the National Institute on Aging, the Federal Highway Administration, the National Highway Traffic Safety Administration, and CDC. The conference brought together 170 specialists in such diverse areas as ophthalmology, endocrinology, gerontology, pharmacology, human factors, and highway vehicle safety and design, to present and review the latest research findings in functional areas related to driving abilities and to identify research worthy issues that apply specifically to the needs of the older driver. A study is currently being conducted to determine the epidemiologic characteristics of falls among the elderly. Data is being analyzed to identify environmental and host risk factors and possible control measures.

Other specific projects funded by CDC include:

- The Florida Department of Health and Rehabilitation Services, as a part of their statewide Injury Control Programs, will be examining the impact and prevention of falls in the elderly. Injuries from falls in Florida claim a disproportionate number of lives; this can be directly correlated to the large elderly population in Florida (third highest in the Nation).
 - An Injury Prevention and Control Program in Baltimore County is focusing on the prevention of falls in the elderly.
 - A New York City program will address pedestrian injuries among the elderly in a collaborative effort with the Department of Transportation's Safety unit and the Department of Aging.
 - In New York State, as an intervention strategy for local health units, a program has been funded to develop prevention packets addressing, among other issues, home safety for the elderly. Packets will be a management tool plus health promotional resource. New York State currently is conducting an intervention project on falls in the elderly.
 - In North Carolina, a program will support a driver Medical Evaluation Program to keep medically impaired persons from driving. A high percentage of this population will be people over 68 years of age.
- Other collaborative projects have been initiated with both the Philadelphia Health Department and the Indian Health Service to target injuries among inter city Blacks and Native Americans. The special needs and risks of the elderly among these high-risk populations are being addressed by these programs.

CENTER FOR INFECTIOUS DISEASE (CID)

In efforts directed towards facilities, CDC is working to define risk factors for the prevention and control of institutionally acquired infections in skilled nursing facilities (SNFs). Through a cooperative agreement, data collection for infections and infection control programs in SNFs in Connecticut was completed. The purpose of the study was to improve the prevention of nosocomial infections in SNFs by identifying infections in skilled nursing homes, associated risk factors and characterizing infection control programs in these facilities. Analysis has been completed and two manuscripts have been accepted for publication in the *American Journal of Infection Control*: "Infection Control Practitioners and Committees in Connecticut Skilled Nursing Facilities" and "Infection Control Practices in Connecticut's Skilled Nursing Facilities." This study demonstrated that among Connecticut SNFs, infection control practitioners increased in number and devote more time to infection control than in previous years. Almost all SNFs (97 percent) had an infection control manual, up from 69 percent in 1979. All facilities surveyed conducted prospective surveillance for infections. Most (82 percent) SNFs had programs to prevent decubitus ulcers. However, less than one-half of SNFs reported that 90 percent or more of their patients received influenza vaccine—numerous outbreaks were reported. This seems to be an area to target for improvement.

CENTER FOR PREVENTION SERVICES

CDC is continuing its efforts to make adults aware of the need to be immunized against the vaccine preventable diseases of pneumococcal pneumonia, influenza, tetanus, diphtheria, hepatitis B, measles and rubella. CDC, through a contract, developed and evaluated an intervention system that included audiovisual materials and a handbook aimed at assisting local and State health departments to promote immunization of adults in the community. In addition, in collaboration with State and local health agencies, CDC distributed approximately 20,000 copies of a manual describing ways to improve the administration of influenza vaccination programs in nursing homes.

CDC featured the adult immunization theme as part of the 22nd National Immunization Conference held in San Antonio, Texas in June 1988. A number of presentations and workshops were held and over 450 participants attended. The proceedings and workshop findings will be published and distributed in 1989.

A cooperative agreement continues in effect with a health maintenance organization (HMO) trade organization to measure vaccine use and develop procedures to increase acceptance of adult vaccines by HMO subscribers.

CDC is continuing its participation with a coalition of over 50 public and private organizations to promote National Adult Immunization Awareness Week during the last week of October each year. The National Coalition for Adult Immunization (NCAI) was formed during 1988 and includes the American Academy of Family Physicians, the American College of Physicians, the American Hospital Association, the American Lung Association, the American Health Association, the Association of

State and Territorial Health Officials, the Centers for Disease Control, the Health Insurance Association of America, the National Foundation of Infectious Diseases, and the Pharmaceutical Manufacturer's Association as a Steering Committee. Three Actions Groups have been formed to target physician and other providers for information and education messages and activities: Influenza/Pneumococcal; Measles, Mumps, Rubella; and Hepatitis B.

CDC is assisting State and local health systems in expanding immunization program coverage of adult populations through the promotion of Recommendations of the Immunization Practices Advisory Committee (ACIP) of Adult Immunization.

CDC and the Health Care Financing Administration are jointly conducting a demonstration project to determine if it is cost-effective for Medicare to cover the use of influenza vaccine. This project involves the provision and administration of influenza vaccine to Medicare part B recipients in nine sites. In 1989, the demonstration project was primarily involved in the recruitment of medicare providers to administer influenza vaccine and the development of surveillance systems to detect the presence of influenza in communities. It is anticipated that in the second year of the demonstration project, more than 50 percent of Medicare part B eligibles will be vaccinated in the nine sites. The demonstration project will last between 2 and 4 years. If the project successfully demonstrates cost-effectiveness, the coverage will become a routine covered expense under the Medicare part B program.

CDC continues to be involved in the planning and implementation of the National Vaccine Program, and has included adult immunization as one of the major components of this program. Efforts continue to be made to measure the cost and effects of adult immunization in selected target populations and these efforts will be continued in 1989.

Tuberculosis (TB) among the elderly is an important problem. During 1988, 6,092 TB cases were reported among persons age 65 and older. TB case rates among the elderly are higher than in any other age group. In 1988, the case rate for persons of all ages was 9.1 per 100,000 population while the rate for those persons age 65 and older was 20.1.

Elderly residents of nursing homes are at even higher risk for developing TB than elderly persons living in the community. According to a CDC-sponsored survey of 15,379 reported TB cases in 29 States, the incidence of TB among elderly nursing home residents was 39.2 per 100,000 person-years while the incidence of TB among elderly persons living in the community was 21.5 per 100,000 person-years. Dr. William Stead, of Arkansas, and other investigators have reported TB outbreaks in nursing homes in which transmission of tuberculous infection to residents and staff was documented.

During 1989 the HHS Advisory Committee for Elimination of Tuberculosis assisted CDC with development of specific recommendations for controlling TB among nursing home residents and employees. The recommendations, which are scheduled for publication during 1990, call for TB screening of nursing home residents and employees at admission or upon employment, annual rescreening for employees, attention to timely casefinding among symptomatic elderly persons, and the use of appropriate precautions to prevent the spread of TB in facilities providing residential care for elderly persons.

Over the past several years, CDC has focused increased effort on determining the oral health needs of older adults within States, and on planning of national initiative to emphasize the value of oral health among older Americans. With other units of the Public Health Service (including the National Institute of Dental Research) and dental professional organizations, CDC has engaged in early planning for this initiative.

CDC has been selected to receive assistance from Postdoctoral Fellows in Applied Gerontology by the Gerontological Society of America. One fellow developed survey instruments that health agencies can use in conducting needs assessments; the validated instruments permit collection of standard, comparable information from older adults regarding their oral health knowledge, attitudes, and behaviors, as well as perceived benefits of dental disease preventive measures. During the summer of 1989, a second fellow determined the current status of oral health programs for older adults within States, including factors that have fostered or impeded program development, then offered recommendations regarding future directions for such programs.

NATIONAL CENTER FOR HEALTH STATISTICS, CDC

ACTIVITIES CONCERNING DATA ON THE AGING

INTRODUCTION

The National Center for Health Statistics (NCHS) is the Federal Government's principal health statistics agency. The NCHS data systems address the full spectrum of concerns in the health field from birth to death, including overall health status, life style, the onset and diagnosis of illness and disability, and the use of health care.

The Center maintains over a dozen surveys that collect health information through personal interviews; physical examinations and laboratory testing; review of hospital, nursing home, and physician records; and other means. These data systems, and the analysis and reports that follow, are designed to provide information useful to a variety of policymakers and researchers. NCHS frequently responds to requests for special analysis of data that have already been collected and solicits broad input from the health community in the design and development of its surveys.

Since most of the data systems maintained by NCHS encompass all age groups in the population, a broad range of data on the aging of the population and the resulting impact on health status and the use of health care is produced. For example, NCHS data have documented the continuing rise in life expectancy and trends in mortality that are essential to making population projections. Data are collected on the extent and the nature of disability and impairment, limitations on functional ability, and the use of special aids. Surveys currently examine the use of hospitals, nursing homes and physicians' offices and are being expanded to cover hospital emergency rooms, surgi-centers, home health care, and hospice.

In addition to NCHS surveys of the overall population that produce information about the health of older Americans, a number of activities provide special emphasis on the aging. They are described below.

A FOCAL POINT FOR DATA ON AGING

In 1989, NCHS established a focal point for data on aging by creating a position of Coordinator on Aging. Joan F. Van Nostrand is the Coordinator. This focal point cuts across the Center's data systems to coordinate:

- The Collection, analysis, and dissemination of health data on older Americans;

- International research in data on aging; and

- Measurement research in aging in such areas as development of a uniform data set for long-term care and assessment of disability.

The Coordinator provides information to the general public about NCHS activities and data on aging Americans.

HEALTH OF AN AGING AMERICA; 1989 BIBLIOGRAPHY

NCHS has published a guide to its report on the health of older Americans. The 1989 bibliography is a guide by subject to recent NCHS reports about various aspects of aging and the health of America's older citizens. It focuses on NCHS reports that provide indepth data on aging, whether or not they deal exclusively with older persons. Subject areas include health status, functioning, long-term care, health policy and mortality. The Bibliography is the first in a periodic series of guides to NCHS data about aging. Copies are available free of charge from the NCHS Coordinator of Data on Aging. An updated version of the Bibliography will be published in 1991.

PROPOSED SURVEY OF THE DYNAMICS OF AGING

In response to the growing interest in longitudinal data, the NCHS has developed a proposal for a Survey of the Dynamics of Aging (SODA). SODA's intent is to produce longitudinal data on older Americans to analyze health, economic well-being and critical life events in terms of their dynamic interrelationships. SODA has a dual focus—on disability and on aging successfully. SODA gives special attention to health promotion issues by including periodic mini-physical examinations. Specifics concerning content and methodology vis-a-vis policy and epidemiologic issues are under development in 1991.

INTERNATIONAL COLLABORATIVE EFFORT ON MEASURING THE HEALTH AND HEALTH CARE OF THE AGING

NCHS launched the International Collaborative Effort on Measuring the Health and Health Care of the Aging (abbreviated as the ICE on Aging) in late 1988. The purpose of the ICE on Aging is to join with international experts in conducting research to improve the measurement of health and health care of the aging. Research results will be applied to the Center's programs to strengthen the collection, analyses and dissemination of data on older persons. The international emphasis of the research permits the exchange of multiple perspectives, approaches and insights among nations facing similar situations and challenges. Results of this collaborative effort can provide greater opportunities for comparisons and linkages of health data on aging among nations. Results will be disseminated widely to encourage their international application.

An International Symposium on Data on Aging was held in late 1988 to develop proposals for research in selected areas. In early 1989, the following research projects were approved for implementation:

- Comparative Analysis of Health Statistics for Selected Diseases Common In Older Persons: USA and Hong Kong;

- Measuring Outcomes of Nursing Home Care: USA, Australia, Canada, The Netherlands, Norway;

- The Measurement of Vitality In Older Persons: USA and Italy; Health Promotion and Disease Prevention Among the Aged: USA and The Netherlands; and

- Functional Ability: USA, Canada, Hungary, Israel.

In 1989, NCHS issued the first Information Update for the ICE on Aging. It describes the project in depth. To obtain a copy and be placed on the mailing list for future updates, contact the NCHS Coordinator of Data on Aging. The Proceedings from the 1988 International Symposium will be published in 1991. An International Symposium for presentation of interim results of the five research projects is tentatively scheduled for fall 1991.

FEDERAL FORUM ON AGING-RELATED STATISTICS

The NCHS, in conjunction with the National Institute on Aging and the Bureau of the Census, co-chairs the Federal Interagency Forum on Aging-Related Statistics. The Forum encourages communication and cooperation among Federal agencies in the collection, analysis, and dissemination of data on the older population. The Forum consists of over 20 Federal agencies that produce or analyze data on the aging population. The Forum has three standing committees: (1) Data Needs and Analytic Issues; (2) Methodological Issues; and (3) Data Presentation and Dissemination. The NCHS provides the staff support for the Standing Committee on Data Needs and Analytic Issues.

In 1990, the Forum issued a report on Guidelines for Collecting Income Data for the Elderly. As an outgrowth of the Forum's work in 1989, an article was published in the November 1990 *Journal of Gerontology* on Measuring Activities of Daily Living: Comparisons Across National Surveys. Copies of reprints are available from the NCHS Coordinator of Data on Aging.

In 1991, the Forum will release its report about issues in measuring cognitive functioning of the aging.

NATIONAL MORTALITY FOLLOWBACK SURVEY

During 1986, data collection began for the National Mortality Followback Survey, the first such survey in 18 years. The followback survey broadens the information available on the characteristics of mortality among the population of the United States from the routine vital statistics system by making inquiry of the next of kin of a sample of decedents. Because two-thirds of all deaths in the Nation in a year occur at age 65 or older, the 1986 survey focuses on the study of health and social care provided to older decedents in the last year of life. This is a period of great concern for the individual, the family and community agencies. It is also a period of large expenditures. Agency program planning and national policy development on such issues as hospice care and home care can be enlightened by the data from the Survey. A public use data tape from the next-of-kin questionnaire was released in 1988. A second tape, combining data from the next-of-kin and hospitals and other health facilities, was released in 1990. Several summary reports were released in 1989 and 1990. The reports, which focused on the aging, were about persons dying of diseases of the heart and of cerebrovascular disease.

NATIONAL NURSING HOME SURVEY

During 1985, NCHS conducted the national Nursing Home Survey (NNHS) to provide valuable information about older persons in nursing homes. The NNHS was first conducted in 1973-74 and again in 1977.

A summary report, which integrated final data from the various components of the survey, was published in January 1989. Also published in 1989 were two analytical reports, one on diagnostic related groups and one on utilization. In 1990 two reports were published: an analytical report on long-term care for the functionally dependent institutionalized and non-institutionalized elderly and a report on discharges from nursing homes. Also in 1990, the public use tape from the Next of Kin Component of the NNHS was released. Other analytical reports on various topics will be published during 1991. Public-use computer tapes are available through the National Technical Information Service.

NATIONAL NURSING HOME SURVEY FOLLOW-UP

The National Nursing Home Survey Followup (NNHSF) is a longitudinal study which follows the cohort of current residents and discharged residents sampled from the 1985 NNHS. The three waves of data collection have now been completed. Wave I was conducted from August through December of 1987. Wave II was conducted from July through November 1988. Interviewing for Wave III began in February of 1990 and was completed in April 1990. Public use data tapes for Waves I and II will be released in winter, 1991. Wave III data tapes will be available in summer, 1991.

The NNHSF interviews were conducted using a computer-assisted telephone interview system. Respondents were asked questions concerning the subject's vital status, living arrangements, and nursing home stays, hospital stays, and sources of payment for stays occurring between the Wave I, II, and III interviews. The NNHSF is a collaborative project between the NCHS and the National Institute on Aging. In addition, in collaboration with the Office of the Assistant Secretary for Planning and Evaluation of DHHS, seven new questions are asked in Wave III concerning the disposition of the subject's own home.

LONGITUDINAL STUDY ON AGING

In 1984 a large supplement, the Supplement on Aging, was added to the National Health Interview Survey. The Supplement on Aging was used to obtain information about 16,148 people age 55 and over living in the community. The focus was on housing, including barriers and ownership; support, including number and nearness of living children and recent contacts in the community; retirement, including reasons for retirement and sources of retirement income; and measures of disability, including activities of daily living, instrumental activities of daily living, and ability to perform work-related activities.

The 1984 Supplement on Aging was designed to be the basis of prospective studies. The first of these is the Longitudinal Study on Aging (LSOA), a collaborative project of the National Institute on Aging and the NCHS. The first version of the public-use data file was released in July 1987. This file contains information for 1984 from the National Health Interview Survey basic questionnaire, the Supplement on Aging, and the Health Insurance Supplement; information from the 1986 re-interview; and the National Death Index (NDI) match information for 1984 and 1985. It also contains a description of the study and the questionnaires. It is available from the Division of Health Interview Statistics and the National Archives of Computerized Data on Aging.

Version 2 of the LSOA file was released in 1988. All data on version 1 of the person file (the 1987 release) are retained without change. Additional data on the person file included results of the 1986 NDI match, results of the decedent follow-back survey, coding of the reasons for moves and whether moves were across State lines, and indicators for matches with HCFA files.

Two additional files have been added in the 1988 release. One is the Medicare Part A match. There is one record for each hospitalization from 1984 through 1987. The other is the Medicare Part A and B match for nonhospital use. It contains indicators for each year on whether the individual has used one of four out-of-hospital services.

The participants in the 1984 survey who were aged 70 and over in 1984 were interviewed again in 1988 using computer-assisted telephone interviewing and mail followup. Data from this interview and from the matches with Medicare and NDI files were on the Version 3 release in fall 1990. Data from the third reinterview, conducted in 1990, will be released on version 4.

DATA FOR ANALYSIS OF SECULAR TRENDS

From 1969 through 1981, the procedures and questions for the basic questionnaire of the National Health Interview Survey remained relatively constant. The National Institute on Aging and NCHS have taken advantage of this long series of repeated questions to develop a historical file for the analysis of secular trends. This public-use file is a unique resource for looking at secular change or investigating the health status of older persons when they were younger. It is available through the Division of Health Interview Statistics and the National Archive of Computerized Data on Aging.

The descriptions of the procedures and the questionnaires have been published by the National Center for Health Statistics in Vital and Health Statistics Series 1 No. 18 (National Interview Survey Design, 1973-84, and Procedures 1975-1983). Questionnaires and data have also been published in Vital and Health Statistics Series.

NATIONAL HEALTH AND NUTRITION EXAMINATION SURVEY III

The National Health and Nutrition Examination Survey (NHANES) provides valuable information available only through direct physical examinations of a probability sample of population. The third cycle of this survey, NHANES III, went into the field in 1988. NHANES III will provide a unique data base for older persons, as a number of important methodologic changes have been made in the survey structure. There is no upper age limit (previous surveys had an age limit of 74 years), and the sample will be selected to include approximately 1,300 persons aged 80 or older. The focus of the survey includes many of the major chronic diseases or aging which cause morbidity and mortality including cardiovascular disease, osteoarthritis, osteoporosis, pulmonary disease, dental disease, and diabetes.

In addition to the focus on nutrition, information on social, cognitive, and physical function is incorporated into the survey. A home examination will be available for those unable or unwilling to come to the central examination site, the Mobile Examination Center. It is planned that longitudinal followup of persons in the survey will be accomplished (including links to administrative records such as Medicare information and the National Death Index) and a specimen bank will be information and the National Death Index) and a specimen bank will be established. The major activity in 1990 was the fielding of the survey.

A conference is planned for 1991 on approaches to analysis of the survey's nutrition data on the elderly. In 1991, Cycle I of the survey will end. Cycle II of the survey will be conducted from 1992-94.

NHANES I EPIDEMIOLOGIC FOLLOWUP STUDY

The NHANES I Epidemiologic Followup Study (NHEFS) is a national longitudinal study designed to investigate the relationships between clinical, nutritional, and behavioral factors assessed at baseline (NHANES I) and subsequent morbidity, mortality, and institutionalization. The NHEFS population includes the 14,407 participants who were 25-74 years of age when first examined in NHANES I (1971-75). NHEFS is a joint project involving the National Center for Health Statistics, the National Institute on Aging, other components of the National Institutes of Health, the Alcohol, Drug Abuse, the Mental Health Administration, and the Centers for Disease Control. The first wave of data collection, the 1982-84 NHEFS, was conducted for all members of the NHEFS cohort (14,407). It included the tracing of the cohort, in-depth personal interviews with subjects or their proxies, measurements of pulse, weight, and blood pressure for surviving participants, collection of hospital and nursing home records, and death certificates for decedents. Contained followups of the NHEFS population were conducted in 1986 and 1987 using the same design and data collection procedures developed in the 1982-84 NHEFS, with the exception that a 30-minute computer assisted telephone interview was administered and no physical measurements were taken. The 1986 NHEFS was conducted on members of the cohort who were 55-74 years of age at their baseline examination and not known to be deceased ($n=3,980$). The 1987 NHEFS was conducted on the entire nondeceased NHEFS cohort ($n=11,750$). An additional wave of data collection is being planned for 1991-92 and will include the entire nondeceased NHEFS cohort (11,195). While persons examined in NHANES I were all under age 75 at baseline, by 1986 more than 2,000 subjects were over 75, providing a valuable study group to examine the aging process.

Public use data tapes are available from the National Technical Information Service for both the 1982-84 and the 1986 followups. Each set of four tapes contain information on vital and tracing status, subject and proxy interviews, health care facility

stays in hospitals and nursing homes, and mortality data from death certificates. All NHEFS Public Use Data Tapes can be linked to the NHANES I (baseline) Public Use Data Tapes. Data from the 1987 NHEFS are expected to be released in the Summer of 1991.

IMPROVING QUESTIONS ON FUNCTIONAL LIMITATIONS

The National Laboratory for Collaborative Research in Cognitive and Survey Measurement of NCHS has recently conducted cognitive interviews with old (65-74), very old (75-84), and oldest (85+) respondents to test the adequacy of existing survey questions for collecting information on functional limitations (e.g., limitations in bathing, dressing, transferring, etc.). Recommendations for the redesign of these questions are being developed. Another study, investigating the adequacy of existing questions on occupational history, residential history, and functional limitations history began in fall 1990. Pending funding, field experiments are being planned to compare the validity of the traditional and cognitively redesigned questionnaires for the elderly respondents. Similar projects on other problems of the frail elderly, such as falls and compensations for functional limitations, are also being initiated.

NATIONAL HEALTH CARE SURVEY (NHCS)

In response to changes during the past decade in the delivery of health care, the National Center for Health Statistics is restructuring its four surveys of health care providers. The National Ambulatory Medical Care Survey, the National Hospital Discharge Survey, the National Nursing Home Survey, and the National Master Facility inventory are being merged and expanded, over time, into an ongoing, integrated NHCS. In part, this is being accomplished by reducing the sample sizes for health care providers covered in existing surveys and by stretching the sample over a number of years.

The primary objectives of the NHCS are: to provide national data for "alternative" sites of health care, such as hospital emergency and outpatient departments, ambulatory surgi-centers, home health agencies, and hospices; to increase the analytical uses of survey data through the use of an integrated cluster sample design; to develop the capability to conduct patient follow-up studies to examine issues related to the outcome and subsequent use of medical care; and to survey health care providers on an annual basis, thus eliminating gaps in data.

The NCHS is designed to cover the three major types of health care as well as inventory health care providers:

Hospital Care

- Inpatient
- Outpatient surgery
- Outpatient departments and clinics
- Emergency departments

Ambulatory Care

- Physicians' offices
- Freestanding surgi-centers

Long-Term Care

- Nursing and personal care homes
- Home health agencies
- Hospices

Health Provider Inventory

- Nursing and personal-care homes
- Hospices
- Home health agencies
- Residential care homes
- Facilities for the mentally retarded
- Facilities for the mentally ill

The National Ambulatory Medical Care Survey and the National Hospital Discharge Survey are ongoing. Plans call for implementing surveys to cover the "alternative" sites listed above in 1991 to 1994.

OFFICE OF DISEASE PREVENTION AND HEALTH PROMOTION

The Office of Disease Prevention and Health Promotion (ODPHP) was established by Public Law 94-317, the National Consumer Health Information and Health Promotion Act of 1976, and functions under the provisions of Title XVII of the Public Health Service Act, as amended. Located within the Office of the Assistant Secretary for Health, at the U.S. Department of Health and Human Services (DHHS), the mission of ODPHP is to help promote and prevent disease among Americans. The Office undertakes this mandate by developing prevention policy; coordinating and facilitating the prevention activities of the five principal agencies of the Public Health Service (PHS); and helping to stimulate and foster the involvement of non-Federal groups in disease prevention and health promotion activities.

People who reach the age of 65 can now expect to live into their eighties. However, it is likely that not all those years will be active and independent ones. Thus, improving the functional independence, not just the length, of later life is an important element in promoting the health of this age group.

One measure of health that considers quality as well as length of life is the years of healthy life. While people aged 65 and older have 16.4 years of life remaining on average, they have about 12 years of healthy life remaining. Another indicator of quality of life is an individual's ability to perform activities required for daily living, such as bathing, dressing, and eating. Difficulty in performing these necessary tasks leads to the need for assistance and often limits opportunity for remaining independent in the community. People aged 85 and older constitute a substantial share of all people who are not independent in physical functioning.

While many people think of health problems in old age as inevitable, a substantial number are either preventable or can be controlled. The major causes of death among people aged 65 and older are heart disease, cancer, stroke, chronic obstructive pulmonary disease, pneumonia, and influenza. Chronic problems, such as arthritis, osteoporosis, incontinence, visual and hearing impairments, and dementia, are of equal concern because of their significant impact on daily living. To accommodate the changing needs of an increasingly older society, we must prevent the ill from being disabled and help people with disabilities preserve function and prevent further disability.

A growing body of evidence shows that changing certain health behaviors, even in old age, can benefit health and quality of life. Cigarette smoking is one of these habits. Studies have shown that when older smokers quit, they increase their life expectancy, reduce their risk of heart disease, and improve respiratory functions and circulation. Good nutrition is also important in the promotion and maintenance of health for older adults. Diet can play an important role in mitigating existing health problems with older people. Reducing sodium intake and losing weight, for example, can help keep blood pressure under control, and there is growing evidence that nutrition counseling and food programs can reduce the risk of disease among older adults.

Another key ingredient to healthy aging is physical activity. Often physiological decline associated with aging may actually be the result of inactivity. Increased levels of physical activity are associated with a reduce incidence of coronary heart disease, hypertension, noninsulin-dependent diabetes mellitus, colon cancer, and depression and anxiety which are diseases prominent in older adult populations. Moreover, increased physical activity increases bone mineral content, reduces the risk for osteoporotic fractures, helps maintain appropriate body weight, and increases longevity. It may also be that increased physical activity levels can improve balance, coordination, and strength, factors that may reduce the likelihood of falls in the older adults.

People over age 65 also need regular primary health care services to help them maintain their health and prevent disabling and life-threatening diseases and conditions. Clinical preventive services include the control of high blood pressure, screening for cancers, immunization against pneumonia and influenza, counseling to promote healthy behaviors, and therapies to help manage chronic conditions such as arthritis, osteoporosis, and incontinence. Especially important among these clinical services are those to detect breast cancer: screening mammography and clinical breast examination. These interventions are estimated to reduce mortality from breast cancer in women over age 50 by about 30 percent. In addition, Pap tests to detect cervical cancer are important for older as well as for younger women. Careful reviews of medication use and patient counseling by health professionals are other important services for this population in order to reduce the risk of adverse reactions and other problems associated with the use and misuse of medications.

HEALTHY PEOPLE 2000: NATIONAL HEALTH PROMOTION AND DISEASE PREVENTION OBJECTIVES FOR THE YEAR 2000

ODPHP was responsible for the development of *Healthy People 2000*, released by Secretary Louis W. Sullivan in September, 1990. This report, the product of an unprecedented cooperative effort among government, voluntary, and professional organizations, business, and individual citizens, has launched a national initiative to improve the health of all Americans significantly in 10 years through a coordinated and comprehensive emphasis on prevention. Forming the cornerstone of this effort is a set of national health promotion and disease prevention objectives for the year 2000.

Healthy People 2000 sets broad public health goals for a decade, as did the first *Healthy People: The Surgeon General's Report on Health Promotion and Disease Prevention* in 1979. The three principal goals for the 1990s are to—

Increase the span of healthy life for Americans.

Reduce health disparities among Americans.

Achieve access to preventive services for all Americans.

To help meet these goals, 300 specific objectives have been identified in 22 separate priority areas. Quantifiable targets have been set for improvements in health status, risk reduction, and service delivery to consolidate the gains made in the 1980s and extend the benefits of prevention to those groups who experience higher rates of morbidity, disability, and mortality than the general population. Organized under the broad approaches of health promotion, health protection, and preventive services, the national objectives chart a 10-year course for individual, collective, and environmental change.

The year 2000 health objectives succeed the 1990 health objectives that were set in 1980, following publication of *Healthy People*. Several themes distinguish the two efforts, reflecting the progress and experience of 10 years, as well as the expanded science base. A greater emphasis is placed on health outcomes other than premature mortality, reflecting a new appreciation for the prevention of morbidity and disability that can impair functional capacity. Furthermore, while significant improvements have been made in the Nation's health profile over the past decade, gains have not been universal. Many of the new objectives aim specifically at improving the health status of certain groups of people who bear a disproportionate burden of suffering compared to the general population. This emphasis will be especially critical in the 1990s since many of these groups will also be experiencing a faster rate of growth than the population as a whole.

Approximately 55 of the 300 objectives focus specifically on or are strongly related to the health of older adults. To help address these objectives, ODPHP awarded a cooperative agreement to the American Association of Retired Persons (AARP). Called *Healthy Older Adults 2000*, AARP's initiative will promote efforts by health and aging organizations to address the wide range of health promotion, health protection, and preventive services objectives set for this population. AARP will focus additional special attention on the prevention of falls and fall-related injury (i.e., hip fractures) and the preventable factors related to falls. These factors include: poor physical condition (lack of exercise), misuse of medications, visual impairment, alcohol abuse, and environmental hazards in the home.

FOOD AND DRUG ADMINISTRATION

As the percentage of elderly in the Nation's population continues to increase the Food and Drug Administration (FDA) has been giving increasing attention to the elderly in the programs developed and implemented by the Agency. FDA has been focusing on several areas for the elderly that fall under its responsibility in the regulation of foods, drugs and medical devices. Efforts in education, labeling, drug testing, drug utilization, and adverse reactions have been of primary interest. Close relationships have been established with both the National Institute on Aging and the Administration on Aging of the Department of Health and Human Services to further strengthen programs that will assist the elderly in their medical care. Some of the major initiatives that are underway are described below.

PATIENT EDUCATION

To further the goals established by the joint Public Health Service/Administration on Aging Committee on Health Promotion for the Elderly, during the last 8 years FDA has coordinated the development and implementation of significant patient education programs with the National Council on Patient Information and Education (NCPPIE) and many private sector organizations. NCPPIE is a nongovern-

mental group consisting of medical pharmacy, consumer, and pharmaceutical organizations whose goal is to stimulate patient education program development. Special emphasis has been placed on the elderly, who use more prescription drugs per capita than the rest of population.

The "Get the Answers" campaign is the primary program urging patients to ask their health professionals questions about their prescriptions. The major component of the campaign is a medical data wallet card that lists the five questions patients should ask when they get a prescription. These questions are:

- What is the name of the drug and what is it supposed to do?
- How and when do I take it—and for how long?
- What foods, drinks, other medicines, or activities should I avoid while taking this drug?
- Are there any side effects, and what do I do if they occur?
- Is there any written information available about the drug?

The "Get the Answers" message has been widely disseminated to consumers through news releases advice columns, and other media.

In October 1986 FDA and NCIPIE joined in a press conference to launch the first national "Talk About Prescriptions" month. The purpose of the month was to stimulate activity to motivate health professionals to give—and consumers to seek—the information needed for safe and effective medication use. The campaign theme—"The Other Drug Problem"—resulted in extensive media coverage. Numerous organizations across the country conducted educational activities in support of the campaign. The "Talk About Prescriptions" month campaign was so successful that NCIPIE decided to make it an annual event.

The second "Talk About Prescriptions" month held in October 1987, emphasized the problem of improper medication use among the elderly. At the press conference to kick off the month, NCIPIE officially released their report on improper medication use among older people and announced a new public education campaign to improve communications between health professionals and the elderly.

The public education campaign consisted of: a 30-second TV public service announcement (PSA), a 30-second radio PSA, a four-color brochure and print ads for consumer and professional publications. The campaign focused on effective communication between the older patient and the health care professional as the way to reduce medication misuse. Media materials—using the slogan "Before You Take It, Talk About It"—urged older consumers to talk with doctors, pharmacists, and nurses about the medicines prescribed for them.

NCIPIE has received a 20 percent reply rate on bounceback cards from television stations reporting how often they used the spots and commenting on the quality of the ad. A professional analysis of these bounceback card responses indicated the spots were well-received by a great majority of respondents. The bounceback cards NCIPIE received in response to the radio PSAs indicated a high degree of satisfaction and that some radio stations preferred to have their radio personnel read PSAs. As a result, in 1988 NCIPIE mailed scripts to 1,000 radio stations and to the major radio networks.

The third "Talk About Prescriptions" month occurred in October 1988. The campaign newsletter included an article entitled "Meeting Older Patients' Medication Needs at Home" and information on obtaining resource material designed for older consumer. FDA distributed the "Talk About Prescriptions" month campaign newsletter to its newsletter editor network and several thousand consumers and multiplier organizations asking that they conduct educational campaigns.

As an outgrowth of the "Talk About Prescriptions" month program, the District of Columbia launched a city-wide campaign in October 1988 to educate older people and health providers about the safe use of medicine. The campaign ran for 6 months and targeted over 80,000 senior citizens living in the District who were reached through direct mail, community workshops, and media activities.

Material for the 1989 "Talk About Prescriptions" month campaign included articles entitled "Medicine Misuse Among Older People: New Evidence of a Significant Problem" and "Working With Older Patients to Improve Medicine Use." It also included a clip and copy page entitled "Helping Your Independent Older Parents Use Medicines Safely" as well as a section on resources available "especially for the older consumer."

FDA issued an FY 1989 assignment to the Field Consumer Affairs Officers to conduct Patient Education Forums to discuss the problems of prescription medication misuse and to plan the October 1989 "Talk About Prescriptions" month campaign. One of the main target audiences for these forums is organizations that work with the elderly.

Concurrent with the activities aimed at patients, FDA, NCPIE and many private sector organizations are conducting a major campaign to encourage health professionals to provide drug information to their patients. Urging consumers to "Get the Answers" and health professionals to "Give the Answers" is vital to bridge the communications gap—to get both sides to talk to each other about medications.

In addition to patient education initiatives FDA and NCPIE are continuing to evaluate the effectiveness of patient education programs and are monitoring the attitudes and behavior of consumers and health professionals about patient drug information. FDA is encouraged by the number and quality of patient education activities undertaken by the various sectors. FDA will continue to provide leadership to foster the patient education initiative.

PREMARKET TESTING GUIDELINES

A final guideline for the premarket testing of drugs likely to be used in the elderly was published by FDA in November, 1989. The guideline addresses issues such as the extent to which drug trials should include elderly patients to help identify dosage regimens and other factors that need to be considered. Although use of a guideline is not a legal requirement, a person may be assured that in following a guideline the recommended procedures and standards will be acceptable to FDA. In addition, in October 1988, FDA published a guideline for the Format and Content of the Clinical and Statistical Sections of a New Drug Application which emphasizes the need to analyze data to search for differences in effectiveness and adverse effects between younger and older patients and to evaluate effects of altered kidney or liver function, other drugs, and other illnesses, all highly pertinent to the elderly.

On November 1, 1990, FDA published a proposed rule to amend its regulations governing the content and format of labeling for human prescription drug products. This proposal would require such labeling to include information in a special section on the use of the drug in elderly patients or indicate that data on such use are unavailable. Public comments on this proposed rule were due by December 31, 1990. FDA proposes that any final rule based on the proposal become effective one year after its date of publication in the *Federal Register*.

FDA's efforts to ensure that premarket testing adequately considers the needs of older people also include educational activities for Institutional Review Boards (IRB) through workshops and the dissemination of information sheets on a variety of topics of interest to IRBs. An IRB governs the review and conduct of all human research at a particular institution involving products regulated by FDA. This aspect of drug testing and research is particularly important to institutional patients, a category comprised of a large number of elderly persons, to ensure adequate protection with regard to informed consent. FDA continues to work closely with the National Institutes of Health to develop and distribute information sheets to clinical investigators and members of the IRB community.

POSTMARKETING SURVEILLANCE EPIDEMIOLOGY

In the area of postmarketing surveillance and epidemiology, the Office of Epidemiology and Biostatistics has introduced a section of the annual adverse drug reaction report focusing on adverse drug reaction reports for individuals over the age of 60. Of the approximately 60,000 adverse reaction reports FDA received in 1989, over 38,000 had age and sex reported. Of these reports, 31 percent were for individuals 60 years of age or over.

In addition to annual review of ADR reports for the elderly, we have also examined drug use patterns using information obtained from IMS America, Ltd., and Pharmaceutical Data Services. In recent years, the five most frequently dispensed drugs to hospitalized patients age 65 years of older have been acetaminophen, potassium chloride furosemide, digoxin, and calcium carbonate/magnesium hydroxide/aluminum hydroxide. The top five ranked drugs as written by physicians in a non-hospital setting for patients age 65 or over have been Lasix[®], Lanoxin[®], aspirin, potassium, and Dyazide[®].

GERIATRIC LABELING

From March through May of 1988, FDA's Drug Labeling, Research and Education Branch (DLREB) conducted a survey of the professional labeling of some 425 selected drugs for geriatric information. The survey drugs were chosen from data bases such as the National Disease and Therapeutic Index (NDTI) which list agents commonly used in the elderly. Half (212) of the products surveyed contained geriatric information. The drug classes with the greatest number of agents with geriatric in-

formation included the central nervous system agents (89 percent), gastrointestinal/genitourinary agents (79 percent), antiarthritic agents (77 percent), hypoglycemic drugs (75 percent), and respiratory agents (70 percent). The classes with the least amount of geriatric labeling were the glaucoma agents (26 percent) and anticlotting agents (31 percent). A first draft was submitted for internal review in May 1990. After allowing sufficient time for review, submission to a journal is expected.

On November 1, 1990, FDA published a proposed rule to amend its regulations pertaining to the content and format of prescription drug product labeling (55 FR 46134). The proposed rule would require a person marketing a prescription drug to collect and disclose available information about the drug's use in the elderly (persons aged 65 years and over). "Available information" would encompass all information in the applicant's possession that is relevant to an evaluation of the appropriate geriatric use of the drug, including the results from controlled studies, other pertinent pre-marketing or post-marketing studies or experience, or literature searches. The information would be placed in a separate section of "Precautions" entitled "Geriatric use" with reference, as appropriate, to more detailed discussions in other parts of the labeling, such as the "Warnings" or "Dosage and Administration" sections. The proposed rule is not intended to alter the type of amount of evidence necessary to support drug approval but is intended to ensure that special information about the use of drugs in the elderly is well organized, comprehensive, and accessible.

ACTIVITIES WITH THE AARP PHARMACY SERVICES DIVISION

MEDICATION INFORMATION LEAFLETS (MILs) FOR SENIORS

The American Association of Retired Persons (AARP) Pharmacy Services Division, in conjunction with FDA's Drug Labeling, Research and Education Branch (DLREB), publish MILs—educational leaflets about drugs written for use through the AARP prescription drug mail order program. In 1989, MILs were written for the following classes of drugs: nonsteroidal anti-inflammatory drugs, beta-blockers, beta-blocker/thiazide combination drugs, and potassium-sparing diuretics and hydrochlorothiazide combination drugs. Additionally MILs were revised for several agents including: warfarin, belladonna alkaloids and barbiturates, isosorbide dinitrate sulfamethoxazole and trimethoprim, quinidine, prazosin, clofibrate, sucralfate and pentoxifylline. The leaflets provide and patient with:

- a description of the contents.
- a list of the diseases for which the drug is used as a treatment.
- information the patient should tell the physician before taking the medication.
- dosage information—how the medication should be taken.
- instructions on what to do if a dose is missed.
- possible interactions with other medications.
- possible serious and non-serious side effects.

In 1990, MILs were written for the following drugs: calcium-blockers, misoprostol, centrally acting alpha blockers, acetaminophen/narcotic analgesics, selegiline, lithium, and labetalol. A total of 25 MILs were revised and updated including the following: gemfibrozil, albuterol, thiazides, cimetidine, ophthalmic timolol, oral hypoglycemic agents, quinidine, and digoxin.

HYPERTENSION SURVEY

The FDA designed and supervised the data collection of a survey to assess information needs and motivations of subgroups of older individuals with hypertension who subscribe to the AARP Pharmacy Service. Analyses are currently underway to identify targeted sub-audiences expected to respond differentially to varying health promotion message strategies. A draft manuscript should be produced by August 1991. In the wake of completed data analyses, targeted messages will be developed and tested on identified sub-audiences.

PRESCRIPTION DRUG HANDBOOK

In early 1990, the FDA assisted in the review and editing of the *AARP Pharmacy Service Handbook*. AARP expects to take the Handbook to press by mid-1991.

DRUG INTERACTION BROCHURE

In conjunction with the National Consumer's League (NCL), and other pharmacy related private organizations, the FDA has written a brochure about drug interactions aimed mainly at the elderly consumer. This brochure explains the elderly con-

sumers what drug interactions are, how to recognize them, and how to avoid them. The brochure was published in July 1990.

GENERIC DRUGS

The elderly in our population, as users of more medications than any other group, benefit greatly from the wide availability of generic drugs that generally cost much less than their brand name counterparts.

Landmark legislation, the Drug Price Competition and Patent Term Restoration Act of 1984, established an abbreviated procedure for FDA's review of marketing applications for a new class of generic drugs that exempts them from expensive re-testing for safety and effectiveness.

This testing was conducted originally for the brand-name drug and is thus not regarded as necessary for the generic copy. By lifting this testing requirement, the 1984 Act removed a major roadblock to the development of generics. Since enactment of the 1984 law, FDA has approved about 2,500 applications for generic drugs. During the past 12 months, approximately 299 abbreviated new drug applications have been approved. By comparison, before the 1984 law, the average annual rate of approvals was about 350 generic products. According to trade groups, generic drug sales are expanding about 14 percent a year. FDA will continue to examine the impact of advertising, labeling, and education efforts on the elderly as more generic drug products are made available in the marketplace.

In September 1986, the Commissioner of FDA chaired a public workshop to review various topics associated with designing and conducting studies that are used to demonstrate that generic drugs are equivalent to performance to brand-name drugs. The purpose of the meeting was to determine whether FDA's testing regulations need updating in light of any new findings, in the scientific area that is relatively new and evolving. Maintaining a state-of-the art capability in this area is regarded by FDA as critical to ensuring that generic drugs work as they are supposed to and provide the elderly and others with an effective lower cost alternative to brand-name medicines. A Bioequivalence Task Force was formed by FDA to study the issues posed at the workshop. The report of the Task Force was released in February 1988 and many of its recommendations have already been implemented.

In 1989, FDA made extensive efforts to resolve all uncertainties that may have been associated with the production of generic drugs and the manner in which they are approved. The Agency has revamped the management of the generic drug operations and put in place stricter controls on the way generic drug applications are processed. FDA is also conducting an extensive and vigorous investigation of the leading drug companies that manufacture generic products in an effort to assure the public of both the safety and efficacy of the generic drug supply in the United States. The Agency is reexamining many of the original drug applications, auditing samples of leading generic products to affirm that they meet specifications for marketing, and negotiating product recalls or application withdrawals where there has been any reason to be concerned that products on the market were not supported by valid data. The Office of Consumer Affairs has worked with the Leadership Council of Aging Organizations and other consumer organizations, to address concerns and maintain consumer confidence by sharing timely and accurate information, reinforcing selected health messages, and providing updates on the Agency's action plan. The Agency has issued an interim report finding that in spite of the concerns, there has been no evidence that the generic drug products on the market have been compromised, and the public can continue to use these products with confidence.

APPROVED DRUG PRODUCTS WITH THERAPEUTIC EQUIVALENCE EVALUATIONS

In order to contain drug cost, virtually all States have adopted laws that encourage or mandate the substitution of less expensive therapeutically equivalent generic drug products for prescribed brand-name drugs. These State laws generally require that substitution be limited to drugs on a specific list or that it be permitted for all drugs except those prohibited by a particular list. In response to requests from the States for FDA's assistance in preparing drug lists that would enable them to implement their substitution laws, FDA published and continually updates the Approved Drug Products with Therapeutic Equivalence Evaluations list. This list identifies currently marketed drug products approved on the basis of safety and effectiveness by FDA under the Federal Food, Drug, and Cosmetic Act and provides information on all generic drugs that FDA had determined to be therapeutically equivalent to brand-name drugs. FDA believes that products considered to be therapeutically equivalent can be substituted with the full expectation that the substituted product will produce the same therapeutic effect as the prescribed product. The United

States Pharmacopeia (USP) has distributed FDA's *Approved Drug Products With Therapeutic Equivalence Evaluation* as a third volume to their USP Drug Information publications. This cooperative venture with the USP will greatly enhance the availability of this FDA publication.

HEALTH FRAUD

Health fraud—the promotion of false or unproven products or therapies for profit—is big business. These fraudulent practices can be serious and often expensive problems for the elderly. In addition to economic loss, health fraud can also pose direct and indirect health hazards to those who are misled by the promise of quick and easy cures and unrealistic physical transformations.

In order to combat health fraud FDA, uses a combination of enforcement and education. In each case, the Agency's decision on appropriate enforcement action is based on considerations such as the health hazard potential of the violative product, the extent of the product's distribution, the nature of any mislabeling that has occurred, and the jurisdiction of other agencies.

FDA has developed a priority system of regulatory action based on three general categories of health fraud: direct health hazards indirect hazards, and economic frauds. When a direct health hazard is involved, FDA takes immediate action—seizure, injunction or recall. When the fraud does not pose a direct health hazard, the FDA may choose to concentrate more on education and information efforts to alert the public. Both education and enforcement are enhanced by coalition building and cooperative efforts between Government and private agencies at the national State, and local levels. Also, evaluation efforts help ensure that our enforcement and education initiatives are correctly focused.

The health fraud problem is too big and complex for any one organization to effectively combat by itself. Therefore, FDA is working closely with many other groups to build national and local coalitions to combat health fraud. By sharing and coordinating resources, the overall impact of our efforts to minimize health fraud will be significantly greater.

FDA and other organizations have worked together to provide consumers with information to help avoid health fraud. FDA and the Pharmaceutical Advertising Council (PAC) developed a public service campaign that uses all media to provide the public with information about how to recognize, avoid, and help stop health fraud. The public awareness campaign was so well received that FDA and PAC developed another public service campaign which was distributed during 1988.

In 1986 FDA worked with the National Association of Consumer Agency Administrations (NACAA) to establish the ongoing project called the NACAA Health Products and Promotions Information Exchange Network. Information from FDA, the Federal Trade Commission (FTC), the U.S. Postal Service (USPA) and State and local offices is provided to NACAA periodically for inclusion in the Information Exchange Network. This system provides information on health products and promotions, consumer education materials for use in print and broadcast programs, and the names of individuals in each contributing agency to contact for additional information.

In order to obtain better information on the nature of the health fraud problem, FDA worked with the Department of Health and Human Services' Office of Planning and Evaluation which contracted with Louis Harris and Associates to conduct a national health fraud survey in 1986. The survey provides the information to effectively target and focus public and private sector activities developed to combat health fraud and is a reliable measure of the reasons why consumers have used various fraudulent products. It also explores attitudes and beliefs with regard to these products. A report of the survey results became available in 1988.

In September 1985, FDA, FTC, and USPS cosponsored a National Health Fraud Conference in Washington, DC. During 1986, as a follow-up to the national conference, FDA held regional health fraud conferences in cities across the country. There were large audiences at most meetings, and the feedback was extremely positive. These local conferences served as the impetus to develop new and expand ongoing health fraud activities and form coalitions with State and local officials, community groups, and professional organizations.

On March 13-15, 1988, FDA and St. Mary's Hospital of Kansas City, MO, cosponsored a second National Health Fraud Conference in Kansas City. This conference was designed to provide practical instruction and guidance on how to combat health fraud at the national, State, and local levels. Through keynote speeches and focused workshops, attendees received information and materials that provide numerous in-

sights on protecting consumers from false claims and promises. One of the more popular workshops was entitled, "The Elderly as Targets of Health Fraud."

In 1988 Consumer Affairs Officers (CAOs) again began conducting regional health fraud conferences. Conferences have been held in Wilkes-Barre, PA; Louisville, KY; Detroit, MI; Albany, NY; Jacksonville, FL; Los Angeles, CA; Indianapolis, IN; and Chicago IL.

CAOs conducted other health fraud initiatives directed to elderly consumers, including presentations to groups of senior citizens, meetings and exhibits. The following are examples of these activities: the Los Angeles CAO helped screen exhibit applications for, and participated in, a "Time of Your Life" exposition attended by over 50,000 senior citizens: CAOs made presentations to groups of elderly in Puerto Rico, Michigan, Georgia, Florida, Indiana, Texas, Illinois, Massachusetts, Colorado, and Missouri.

The first event in FDA's campaign to combat health fraud in the Hispanic population was the 1989 National Health Fraud Conference of Puerto Rico held in San Juan on April 4-5, 1989. A workshop entitled "Why Consumers Become Victims of Health Fraud; The Elderly As Victims of Health Fraud" provided helpful insights into working with the elderly to reduce their risk of becoming victims of quackery. Members of the planning board, who included representatives of Senior Citizens Health Promotion and Maintenance Program; Gerontology Program, School of Public Health—University of Puerto Rico; Governor's Office of Aging, and AARP, served as an advisory body for regional and local meetings held throughout Puerto Rico.

AUXILIARY TO THE NATIONAL MEDICAL ASSOCIATION PROGRAM

In 1984, 8 percent of the U.S. population 65 years and older were Black. Although data on the health of the elderly population for race groups is very limited the data suggest that, overall, the health of elderly Blacks is poorer than for elderly Whites. In general health care delivery to older people is fraught with a wide variety of problems:

- poor communication between older patients and health professionals;
- use of multiple drugs;
- multiple providers;
- altered drug action and response with advancing age;
- inability to take the medication as prescribed; and
- deliberate noncompliance.

To focus attention on these intertwined problems, the Food and Drug Administration and the Auxiliary to the National Medical Association (ANMA) are continuing with a joint public awareness program which focuses on community-based patient education initiatives from a family perspective.

Begun in fiscal year 1989, the program has the following goals:

- develop a patient education and information program about prescription drugs especially targeted to the Black community, with emphasis on the elderly;
- train a cadre of volunteers as trainers at the national level to ultimately result in a national networks of volunteers; and
- demonstrate the education information programs through tailored workshops in select geographical locations among the leading 100 cities with highest concentrations of Blacks, particularly the Black elderly.

Recognizing the importance of not only enlightening senior citizens, but also establishing support networks which ensure institutionalization at the community level, FDA and ANMA chose the community based diffusion model of outreach to optimize the chance for successful and lasting results. The planned outreach activities for this program will when appropriate, involve other agencies, such as the Administration on Aging, which regularly interact with this population.

1987 OSTEOPOROSIS CONFERENCE

On October 30, 1987, FDA's Office of Consumer Affairs sponsored a Special Topic Conference on Osteoporosis. This conference was the first of a series of national events to follow-up the 1986 National Conference on Women's Health where osteoporosis was recognized as a serious public health problem with a particularly significant impact on women's health.

According to statistics compiled by the National Osteoporosis Foundation, approximately 20 million Americans—many of them older women—are affected by this debilitating condition. While the cost of osteoporosis in terms of the quality of life is immeasurable the cost in terms of health care and lost productivity ranges between \$7 to \$10 billion annually.

For this reason, the Food and Drug Administration decided to examine the subject more comprehensively by sponsoring a national conference. The goals of the 1987 Special Topic Conference were twofold:

- To focus national attention on the known risk factors associated with osteoporosis and the critical interventions that can be taken at different phases of a women's life to prevent or minimize the tragic impact of osteoporosis.
- To assist health care providers, health educators, and the media to better discern the knowns, unknowns, and unresolved issues related to the prevention, diagnosis and treatment of osteoporosis.

Building upon the scientific base established at the National Institutes of Health Research Workshop held earlier in the year the conference brought together recognized experts to translate the baseline of scientific findings into practical messages for the clinical management of patients, as well as for the education of women at various life stages.

The conference was attended by 630 registrants representing diverse sectors of the public health community, including health care providers and public health educators, consumers, industry, Federal and State Government and women themselves from all part of the country. The conference proceedings are expected to be available in the spring of 1990.

ACTIVITIES OF CONSUMERS AFFAIRS OFFICERS

Mammography, an x-ray examination of the breast used as a screening tool in the detection of breast cancer, is the best method currently available for detecting tumors in their early stages, offering women their best chance for survival.

A variety of organizations such as the National Cancer Institute (NCI) have issued recommendations concerning when women should undergo mammography. All those organizations agree that all older women—over the age of 50—should be screened annually, but they differ concerning the age when women should be screening.

To inform women and health care providers about mammography and the early detection of breast cancer the Food and Drug Administration's Office of Consumer Affairs and the Center for Devices and Radiological Health initiated an education campaign when focused on the need to select a quality mammography facility.

Initially, directed to a mailing list of over 14,000 organizations and individuals representing the interests of women across the country, including Canada, a "Dear Consumer" letter and information package was mailed on April 14, 1988. Subsequent to the mailing, feature articles on the topic of mammography appeared in a variety of lay and trade media that referred their readers to the FDA for more information.

Additional publicity and information dissemination was conducted by FDA's Consumer Affairs Officers, the Agency's educational arm in the field across the country. Thirty-four CAOs gave further outreach to these important health messages by working with local and regional constituencies.

Another endeavor which was conducted by Consumer Affairs Officers in the Southeastern Region of the country examined the impact of chronic disease—a prevalent problem among older Americans—on low income and minority women.

On January 29, 1988, FDA and the University of Georgia Cooperative Extension Service and Center for Continuing Education cosponsored a videoteleconference titled "Women and Chronic Diseases: Reducing the Risk Factors." The teleconference focused on specific health problems that may increase illness and premature death in women, such as obesity, hypertension, cardiovascular heart disease, diabetes, and cancer. Originating in Athens, GA, the teleconference was satellite-broadcast to approximately 60 sites around the Southeastern United States, reaching over 2,000 community leaders health care providers and educators who serve low income and minority women. A key component of the conference was to challenge the registrants to tailor the education message to their constituents and implement programs at the community level.

In 1989, CAOs continued their efforts to reach consumers on issues important to the aging population by working through multiplier groups such as the Tennessee Commission on Aging, the California Hispanic Women's Health Society and the National Network of Hispanic Women. The Newark District Office co-sponsored a 2-day National Conference with the Gerontology Institute of New Jersey at Princeton, NJ, addressing "Nutritional Needs for the Elderly" and "Drug Abuse and Mismedication in the Elderly." Medication use has been a concern in every region. The California Medication Coalition, Stanford University, and FDA sponsored a 1-day conference on "traditional and Non-Traditional Medication Use Among Ethnic Elders" for over 300 geriatric educators and health care providers. Major health problems

for the elderly such as the disturbing data on the potential danger of Enkaid and Tambacor for non-life-threatening arrhythmias were handled nationally through press releases and hotline calls and regionally through media appearances by CAOs and conference and personal contacts with multiplier groups. A story on hearing aid information placed by a CAO in a Florida newspaper generated over 1,000 requests for additional information.

In 1990, the Office of Consumer Affairs and the Center for Devices and Radiological Health continued their educational efforts in providing information on mammography. A breast cancer and mammography packet were mailed to 10,000 consumer organizations and individuals. The packet included materials, developed to inform women and health care providers about mammograms, a "Mammography Screening Update" providing guidelines for the detection of breast cancer in women without symptoms, and current bibliography of publications on breast cancer available from the National Cancer Institute.

FOOD LABELING

Nutrition information is of particular value to older persons many of whom are advised by their physicians to reduce consumption of salt/sodium and other food components. Thus, FDA's sodium initiatives program is especially useful to the elderly population. FDA regulations concerning the declaration of sodium content and label claims for sodium content became effective July 1, 1986. These regulations have already resulted in greater availability of sodium information to those medically advised to reduce sodium intake as well as to those voluntarily seeking to reduce or moderate sodium consumption.

The regulations define terms such as "low sodium," specifying the maximum levels of sodium that a serving of food may contain when the terms are used on product labels. These rules also require the declaration of the sodium content on food labels which contain nutrition information. Nutrition information is required if a processor adds nutrients to a product or makes nutritional claims about it. In addition, the regulations provide for the voluntary inclusion of potassium content information in nutrition labeling because people with kidney and some other diseases who must control their sodium intake must also control their potassium intake. Also, people with high blood pressure and other related health problems often use potassium in place of sodium.

Many major food manufacturers have voluntarily included sodium information on food labels since FDA sodium initiatives were begun in 1981. Sodium labeling has increased markedly; it is estimated that over half of the products regulated by FDA now carry sodium labeling.

Older persons are frequently medically advised to reduce their fat and cholesterol intake. A tentative final regulation, published in the Federal Register of July 19, 1990, would define terms for the cholesterol content of foods and establish requirements for the inclusion of cholesterol as part of nutrition labeling when claims are made relative to cholesterol content or fat content of a food. This proposal defines the term "cholesterol free" as applicable for any food containing less than 2 mg cholesterol per serving "low cholesterol" for foods containing less than 20 mg cholesterol per serving and "reduced cholesterol" for a 75 percent reduction in cholesterol per serving. The Agency is also advising supermarket chains on appropriate fat and cholesterol shelf labeling initiatives and cooperating with the National Cholesterol Education Program of the National Heart, Lung and Blood Institute.

The older as well as younger population has strong interest in possible relationship between diet and health. Most consumers, but especially the elderly, are vulnerable to misleading health claims about foods. FDA currently is considering ways to permit appropriate health claims on food labels that will not be misleading to consumers. A proposed regulation published in the Federal Register of August 4, 1987, describes the Agency's current position on this issue and requests comments from all interested parties.

Based on the growing body of evidence that diet has a major impact on the development of certain chronic diseases and interest on the part of the food industry, consumers, health professionals, and State and Federal legislative groups, FDA has determined it is timely to consider revising food label requirements. Accordingly, an Advanced Notice of Proposed Rulemaking (ANPRM) was published in the Federal Register on February 13, 1990, requesting comments on whether to revise the requirements for nutrition and ingredient labeling, whether to change the nutrition label format, and whether to formally define commonly used food descriptors and/or reconsider the use of standards of identity for foods. Four public hearings have also

been held on these issues in which many older persons testified on the particular problems they have with current food labeling.

Testimony presented at the hearings and written comments received in response to the ANPRM formed a basis for proposed revisions to nutrition labeling published in the Federal Register of July 19, 1990. These proposals, other planned food labeling proposals, and food labeling changes required by the Nutrition Labeling and Education Act of 1990 (P.L. 101-535, November 8, 1990) all will help to provide older Americans with more informative and understandable food labeling.

TOTAL DIET STUDIES

The Total Diet Study, as part of FDA's ongoing food surveillance system provides a means of identifying potential public health problems with regard to diet for the elderly and other age groups. Through the Total Diet Study, FDA is able to measure the levels of pesticide residues, industrial, chemicals, toxic elements, and nutritional elements in selected foods of the U.S. food supply and to estimate the levels of these substances in the diets of eight age-sex groups (6-to 11-months infants, 2-year-old children, 14-to 16-year-old boys, 14-to 16-year old girls, 25-to 30-year-old females, 25-to 30-year-old males, 60-to 65-year old females, and 60-to 65-year-old males). Because the total Diet Study is conducted yearly it also allows for the determination of trends and changes in the levels of substances in the food supply and in daily diets.

The Total Diet Study is being modified to reflect the latest food consumption information from the 1987-88 U.S. Department of Agriculture Nationwide Food Consumption Survey. The revision will also add about 15 more foods and will include data to calculate dietary exposures for men and women aged 70 and older.

POSTMARKET SURVEILLANCE OF FOOD ADDITIVES

The FDA's Center for Food Safety and Applied Nutrition receives and evaluates approximately 1,500 reports of adverse reactions to food and food additives each year. Of the complainants who reported their age 12 percent were individuals over age 60.

PROJECT ON CALORIC RESTRICTION

FDA is participating in research which could lead to significant insight into the relationship between dietary habits and lifespan. The Project on Caloric Restriction (PCR) is a collaborative effort of FDA's National Center for Toxicological Research (NCTR) and the National Institute on Aging (NIA). It is designed to study whether a diet that is calorically restricted will add to the longevity and health of laboratory rats and mice. An increasing interest in the role of caloric restriction in aging coupled with the potential economic impact associated with health care was the impetus for the creation of the PCR.

The extraordinary interest displayed by research groups across the country and the NCTR's commitment to the PCR project have produced a scientific environment conducive to the interchange of ideas and the formulation of new approaches to the diverse scientific disciplines. NCTR developed a matrix which identifies areas of ongoing research, identifies additional research areas that need to be addressed and helps to avoid duplication of research effort.

Current study results from NCTR indicate that calorically-restricted animals are living longer than animals on unrestricted diets and are exhibiting a reduced incidence of all forms of spontaneous toxicity. In other words, caloric restriction may dramatically influence cancer development toxic response, and biological processes usually associated with aging in animals.

Recent investigations in various laboratories agree that dietary caloric restriction is effective in extending average and maximum achievable life span in animals and in retarding a broad spectrum of age related disease processes, including spontaneously occurring and chemically induced cancers as well as that of many age associated noncancerous lesions.

DNA repair is increased in calorically restricted animals. Hormonal mechanisms may be responsible for the relative increase in this parameter. Oxidative free-radical damage appears to be decreased with caloric restriction in animals and perhaps in humans.

Caloric restriction does not appear to be harmful to behavioral functioning, and may be beneficial for some tasks. Effects of restriction on neural cells, especially hippocampal cells, need further evaluation.

Many of these results are consistent with the idea that caloric restriction induces an adaptation phenomenon within at least some animal species. Not all functions

are altered. Rather, those processes that appear to be most affected are those which have been previously referred to as longevity assurance processes. These processes have as their primary role maintenance of the information flow and content of biological systems and work in concert with one another with the end result being the multiple of these interactive changes. By fine tuning these processes, possibly via altering gene expression in some very basic way, animals may keep themselves alive until a more advantageous period for reproduction. By studying mechanisms of action, we can hopefully gain the advantages of this adaptation phenomena without its negative consequences and discomforts.

The collaborative project between NCTR and NIA is currently undergoing expansion in order to provide animals to more interested researchers and broaden the information base on biomarkers of aging and mechanisms of aging.

MEDICAL DEVICES OF PARTICULAR BENEFIT TO THE ELDERLY

INTRAOCULAR LENSES

Data on intraocular lenses (IOLs) continue to demonstrate that a high proportion (85 to 95 percent) of the patients will be able to achieve 20/40 or better vision with the implanted lenses and that few (3 to 5 percent) will experience poor visual acuity (20/200 or worse). The data also demonstrate that the risks of experiencing a significant post-operative complication are not great. Furthermore many of the complications result during the early post-operative period and are associated with cataract surgery; the incidence of these complications is generally not affected by IOL implantation. Approved lenses have a significant impact on the health of elderly patients having surgery to remove cataracts. The IOLs, because they are safe and effective, aid elderly patients by increasing the options available to maintain their sight and thus their ability to drive and otherwise lead normal lives. The cost of IOL implantation is competitive with other available options, particularly when the continuing cost of contact lens care accessories, such as cleaning and storage solutions, disinfection solutions, or heat disinfection units are considered, FDA continues to monitor several hundred investigational IOL models and has to date, approved over 900 models as having demonstrated safety and effectiveness.

At the same time, FDA scientists are testing the optical quality of IOLs being marketed as investigational devices. FDA studies will include measurements of focal length, resolving power, astigmatism, and image quality. This information will provide a useful data base that can be factual in making decisions about optical quality of new IOL designs. Early test results show that the overall optical quality of currently marketed IOLs is good.

Due to the large number of IOLs now available the situation that originally prompted concern from Congress and resulted in large adjunct investigations, no longer exists and the studies were phased out over a 3-year period beginning in 1986. An adjunct study is a clinical investigation peculiar to IOLs, which permits unlimited IOLs to be implanted under conditions requiring collection of adverse reaction data only. FDA permitted adjunct studies of IOLs in order to comply with provisions in the Medical Device Amendments created to ensure that IOLs would continue to be made "reasonably available" to physicians while data to support their safety and effectiveness were being collected. While the adjunct provisions have permitted widespread and immediate availability of new IOLs, they have provided little benefit from a safety monitoring of data collection perspective. In fact, the availability of large numbers of IOLs through the adjunct study has provided a disincentive to firms to collect, analyze, and submit data to FDA in support of a premarket approval application.

FDA is now in the third year of the 3-year transition to terminate these studies which have outlived their usefulness. FDA completed the phase out in 1990.

PACEMAKERS

Dysfunction of the electrophysiology of the heart can develop with age, be caused by disease or result from surgery. People with this condition can suffer from fainting, dizziness, lethargy, heart flutter and a variety of similar discomforts or ills. Even more serious life-threatening conditions such as congestive heart failure or fibrillation can occur.

The modern pacemaker is designed to supply stimulating electrical pulses when needed to the upper or lower chambers of the heart or with some newer models, both. It has corrected many pathological symptoms for a large number of people.

Approximately half a million elderly persons have pacemakers. At present, an estimated 125,000 pacemakers are implanted annually, 30 percent being replacements.

An estimated 75 percent of these are for persons 65 years of age or older. Without pacemakers, some of these people would not have survived. Others are protected from life-threatening situations and, or most, the quality of life has been improved.

FDA, in carrying out its responsibilities of ensuring the safety and efficacy of cardiac pacemakers, has classified the pacemaker as a Class III medical device. Devices in Class III must undergo testing requirements and FDA review before approval is granted for marketing.

In addition, FDA in conjunction with the Health Care Financing Administration (HCFA) of the Department of Health and Human Services has instituted a national registry of cardiac pacemaker devices and leads. HCFA and FDA have developed an operational registry with a data base of approximately 500,000 pacemaker and lead entries to date.

Physicians and providers of health care services must submit information to a national cardiac pacemaker registry if they request Medicare payment for implanting, removing, or replacing permanent pacemakers and pacemaker leads. The final rule implementing the national registry was published by FDA and HCFA in the July 23, 1987, Federal Register and became effective on September 21, 1987.

Under this new rule, physicians and providers of services must supply specified information for the pacemaker registry each time they implant, remove, or replace a pacemaker or pacemaker lead in a Medicare patient; HCFA may deny Medicare payment to those who fail to submit the required data. The information is submitted to HCFA's fiscal intermediaries at the same time as the bill for services and HCFA relays the data to FDA. Health care providers may obtain forms for submitting the information from the fiscal intermediaries.

FDA plans to use the data from the registry to monitor the long-term clinical performance of pacemakers and leads, FDA will use the registry data, along with information received under the Medical Device Reporting regulation to track failures or defects in certain models of pacemakers and leads and notify HCFA so they may stop Medicare payments for those products.

The required information includes:

- The name of the manufacturer, the model and serial number of the pacemaker or pacemaker lead, and the warranty expiration date.
- The patient's name and health insurance claim number, the provider number, and the date of the procedure.
- The names and identification numbers of the physicians ordering and performing the surgery.

When a pacemaker or lead is removed or replaced, the physician or provider must also submit the date of initial implantation (if known), and indicate whether the device that was replaced was left in the body and, if not, whether the device was returned to the manufacturer.

HEMODIALYSIS

End Stage Renal Disease (ESRD) patients are totally dependent upon dialysis treatment for survival until they receive a transplant, or if that is not possible, for the remainder of their lives. Moreover, ESRD is a disease of the elderly. Recent data released by the United States Renal Data System indicated that the median age adjusted for age and sex for new ESRD patients in 1988 was 60 with nearly 40 percent over 64. The incidence rates of ESRD vary dramatically among age groups, ranging from 1 in 91,000 below age 20, to 1 in 1,876 between ages 64 and 74.

Because of the nature of the treatment, patients are vulnerable to a number of possible hazards during dialysis. Many of the hazards arise from failure to properly maintain and use the equipment, or from insufficient attention to the safety of the dialysis system components. Educational programs are being conducted in several areas to alleviate these problems.

Following the success of the educational video on human factors in hemodialysis previously described, FDA in conjunction with organizations such as the Health Industry Manufacturers Association, the Renal Physicians Association (RPA), and the American Nephrology Nurses' Association, has been active in developing several additional videos and manuals. Complimentary videos illustrating concerns and proper techniques about water treatment and infection control have been distributed to every ESRD facility in the United States. These videos have received a very high level of acceptance from the dialysis community. The Agency has been responsible for improvements in the quality of care for hemodialysis patients. A manual on water treatment which was described in last year's report was also distributed and has been highly acclaimed.

In the past year, a video on the proper reuse of dialyzers developed by the FDA, RPA, and other concerned groups was released. The video follows the protocols detailed in the Association for the Advancement of Medical Instrumentation (AAMI) Recommended Practice for the Reuse of Hemodialyzers. This practice has been adopted by the Health Care Financing Administration as a condition of coverage to ESRD providers that practice reuse.

A multi-State study conducted for the FDA in 1987 indicated that dialysis facilities appeared to be deficient in quality assurance (QA) techniques used in all areas of dialysis treatment. FDA has contracted to develop guidelines that can be used by dialysis facility personnel in establishing QA programs. This contract will be completed in 1991 and the resulting manual published and distributed to all ESRD facilities.

In the past year, FDA has continued to work cooperatively with dialysis personnel and ESRD patients to improve the quality of dialysis treatment. These efforts are yielding positive results.

MAMMOGRAPHY

The FDA has over the years implemented programs directed at mammography that have resulted in improvements in this practice. Since 1975, FDA's Bureau of Radiological Health (later, Center for Devices and Radiological Health) has conducted a great many mammography activities. These have been done with several goals in mind:

- reduce unnecessary radiation exposure of patients during mammography to reduce the risk that the examination itself might induce breast cancer;
- improve the image quality of mammography so that early, tiny carcinoma lesions can be detected at the stage when breast cancer is most treatable with less disfiguring and more successful treatments;
- improve the ability of radiologists to read and interpret mammograms more accurately; and
- develop an integrated U.S. system of diagnosis and treatment of breast cancer.

These activities have been conducted with extensive cooperative involvement with all fifty State Radiation Control Programs, with the American College of Radiology and with other key health professional organizations, with Federal agencies such as the Centers for Disease Control and the National Cancer Institute, as well as with several FDA components.

BREAST EXPOSURE: NATIONWIDE TRENDS (BENT) PROGRAM

FDA initially became concerned about mammography when reports in 1975 indicated the high levels of radiation being used might cause more cancers than the examination detected. By 1976, in cooperation with the States, the National Cancer Institute, and professional groups, FDA's Bureau of Radiological Health (BRH) had developed the BENT program. BRH used mail-out dosimeters to detect facilities with excessive radiation levels and State surveyors visited those facilities to help them correct their problems. Since this program also highlighted the deficiencies of existing x-ray film, film processing, and x-ray equipment technology, BRH also consulted with and encouraged manufacturers to develop improved equipment and film.

RADIOLOGICAL HEALTH SCIENCES LEARNING FILE

There was also great concern about the accuracy of interpretation of the mammograms, primarily because the existing radiology residency training programs did not stress mammography. Consequently, in the early 1980's BRH decided to help improve radiology training by adding a Mammography Section to the Radiological Health Sciences Learning File. The File is now used in essentially all U.S. medical schools and radiology residency programs, as well as many others worldwide. Its films form the basis for the American Board of Radiology's credentialing examination.

QUALITY CONCERNS RAISED BY THE NATIONWIDE EVALUATION OF X-RAY TRENDS (NEXT) PROGRAM

By 1985, the combined efforts of BRH (now the Center for Devices and Radiological Health (CDRH)), professional groups, States, and industry had greatly reduced radiation levels used in mammography. However, it was then that CDRH discovered another serious problem through the Nationwide Evaluation of X-Ray Trends (NEXT) program (a data collection program conducted by the Conference of Radiation Control Program Directors, an organization of State officials, with technical

assistance from CDRH). It was discovered that, although radiation doses in mammography had been reduced to generally acceptable levels, the image quality, as determined from mammograms produced using a phantom to mimic the breast, was much less than desirable. Using methods that became available in 1988, it was retrospectively determined that image quality was not acceptable in about 35 percent of their mammography facilities. This fact, coupled with the fact that many organizations were now encouraging women to have periodic mammography screening examinations, had serious implications.

At the same time, CDRH equipment compliance data showed that the image quality problem was not due to equipment malfunction, but rather was due to poor user performance in patient positioning, selection of appropriate exposure technique factors, and in image processing. FDA does not have the authority to directly regulate radiologists and technologists in their use of x-ray equipment. The American College of Radiology, with extensive technical assistance from CDRH, responded to this problem by developing an accreditation program of mammography facilities. CDRH also encouraged the State radiation control programs to take steps to improve image quality. New York, Michigan, and Wisconsin have responded with strong programs and a number of other States are beginning to increase their oversight of mammography facilities. By 1988, when the States repeated their NEXT survey of mammography facilities, the proportion of facilities with less than adequate image quality had dropped from 35 percent to 13 percent.

THE MEDICARE SCREENING MAMMOGRAPHY BENEFIT

As the value of mammography became increasingly recognized, concern grew about the access of poorer women to this examination. To help solve this problem, the Medicare Catastrophic Coverage Act (MCCA) of 1988 added screening mammography as a benefit under Medicare. FDA was invited by the Health Care Financing Administration (HCFA) to assist in developing regulations to be met by facilities seeking reimbursement for screening mammography. The repeal of the MCCA unfortunately brought this effort to a halt, but the Medicare screening mammography benefit was revived by the Omnibus Budget Reconciliation Act of 1990. During late 1990, HCFA undertook an intense effort to modify the draft regulations into "interim final" regulations to go into effect by the January 1, 1991 effective date for the benefit. CDRH staff, along with the Centers for Disease Control and the National Cancer Institute personnel, have been heavily involved in assisting HCFA in this activity.

PATIENT NOTIFICATION ISSUES—1990

The Center for Devices and Radiological Health (CDRH), in collaboration with other FDA components, held a series of meetings with representatives of consumer and patient advocacy groups, health professional organizations, and manufacturers to learn their views about firms directly notifying patients when a significant defect is discovered involving their particular type and model of cardiovascular implant. Six planned meetings around the country are being held with cardiovascular implant patients and their families to discuss this issue.

For now, FDA is concentrating its inquiry on cardiovascular devices such as pacemakers, heart valves and defibrillators, but the general concepts which are generated from this effort, may apply to other implanted devices as well.

Results from the meetings held thus far show general agreement that:

Direct patient notification by the manufacturer is desirable when a significant defect is discovered in a cardiovascular implant.

Notification to implanting and following physicians and patients is desirable.

Manufacturers need to maintain up-to-date and complete registries to assure patient and physician traceability for notification purposes.

BLOOD GLUCOSE MONITORS

Recent publications estimate the number of diagnosed diabetics in the United States to be 5 million and increasing at a rate of 600,000 per year. Over 65 percent of diabetics are 55 years old and, of course many must monitor their blood glucose.

Since the implementation of Medical Device Reporting (MDR) regulations in December 1984, approximately 2,200 reports were submitted to the FDA regarding performance problems encountered by users of self-monitoring blood glucose (SMBG) systems. As a result of these findings, a project was initiated to study and provide solutions to the problems with use of these devices. The study is being conducted in four phases: (1) information/data analysis, including labeling, instructional and training materials; (2) identification of problems and contributing factors, including

the use of data obtained by survey, contract, scientific literature, laboratory testing and MDR submissions; (3) development of a strategy for corrective action(s); and (4) implementation of corrective actions that could include assistance and collaboration with interested organizations. An SMBG Task Force consisting of CDRH staff members who have had prior experience or are currently involved in matters pertinent to this important health care issue, is responsible for implementing this task.

A team of six CDRH staff reviewed 45 pieces of SMBG labeling (user manuals, summary instructions, and package inserts for reagent strips, lancing devices calibration and control materials) that accompany blood glucose devices sold over the counter for use by diabetics. The review focused on (1) whether step-by-step instructions and other information are presented in a way that facilitates understanding; (2) if illustrations are used and are accurate, clear, and well formatted; (3) if important information such as key tasks to be performed and cautionary statements are adequately emphasized using highlighting techniques; (4) the adequacy of print size used; and (5) if grade reading levels at which the information is written (based on application of the SMBG Grading Formula) are adequate for users.

Currently in process is the Human Factors Analysis of Blood Glucose Monitors contract. The study will:

- determine if operation and instructional materials of blood glucose meters is compatible with users' abilities
- determine if the features of blood glucose meters contribute to user error; and
- determine the quality and quantity of instructional material available to meter users for learning proper meter operation.

Certainly, the limitations of the elderly, e.g., slowed response time, deficient vision, etc. are important considerations in properly using glucose meters. The study will be looking at all of these issues.

HEALTH RESOURCES AND SERVICES ADMINISTRATION

HRSA's programs are far-reaching in their support of health services to disadvantaged and underserved groups. In addition to older people, our clients include mothers and children, minorities, the homeless, the poor, drug users, migrant workers, people with AIDS/HIV, those with Hansen's Disease, and those who need organ transplants. Our challenge is to help assure the best possible care to as many individuals as possible at reasonable cost.

HRSA also provides technical assistance and resources to improve the education, supply, distribution and quality of the Nation's health professionals, and access to health services and facilities. Our partners in these efforts include State and local health departments, universities, private nonprofit organizations, and many other participants in the Nation's public health system.

Several of Secretary Sullivan's and Assistant Secretary Mason's priorities involve HRSA. They include lowering the infant mortality rate, improving minority health, attaining the year 2000 health objectives for the Nation, correcting the maldistribution of health professionals, expanding health care for people with HIV and AIDS, and strengthening the Federal, State, and local public health system.

HRSA must provide leadership to accomplish these goals. In line with our motto, "Helping to Build a Healthier Nation," we work closely with our grantees to provide better service, education, and research in primary care, prevention, and public health. Our communication and policy advocacy will be expanding.

HRSA is concerned about training our Nation's professionals to provide care for today's older individuals and individuals who will be old in the future. The Agency provides services to underserved older Americans, such as those who live in rural areas and those with low incomes. One-third of older Americans live in rural areas. One out of four elderly Americans, or 7.4 million, are poor or near poor.

Several HRSA components significantly influence programs and activities that benefit older Americans, while the HRSA Committee on Aging-Related Issues serves as the focal point within the Agency.

HRSA COMMITTEE ON AGING-RELATED ISSUES

The rapidly expanding population is of particular importance to HRSA because of the implications concerning general health service and resource issues as they relate to access, equity, quality, and cost of care. The Committee, established in December 1987 by the Administrator, has representatives from all Bureaus and components of the Office of the Administrator. It is charged with broad-based responsibilities, including providing advice to the Administrator, improving the awareness of all HRSA employees concerning aging-related issues, providing a forum within the

Agency for sharing information, and developing a plan to increase the relevance and accessibility of HRSA programs to aging Americans.

The Committee assumes responsibility for the annual celebration of Older Americans Month. In 1990 the 2-day celebration included a Colloquium presentation, photography exhibit, and musical presentations by retirees. The Committee also distributed 1 page descriptions of the Agency's aging-related programs.

The Committee coordinates the implementation of the Memorandum of Understanding between AoA and HRSA, which has five major objectives: (1) supporting States and communities in the development of improved health care systems for serving older adults; (2) promoting expanded education and training opportunities for health care personnel; (3) collaborating with the private sector to improve health and health care for the elderly; (4) promoting the maintenance, improvement, and expansion of health services for older persons in rural areas; and (5) supporting model programs for older AoA and HRSA employees and for employees providing care to older family members.

Members of the Committee work closely with other Federal agencies and the private sector. They are engaged in a variety of interagency activities, such as the Forum on Aging-Related Statistics, Ad Hoc Interagency Committee on Research on Aging, and the Interdepartmental Task Force on Aging.

BUREAU OF HEALTH CARE DELIVERY AND ASSISTANCE

The Bureau of Health Care Delivery and Assistance (BHCDA) helps assure that primary health care services are provided to persons living in medically underserved areas and to persons with special health care needs. It also assists States and communities in arranging for the placement of health professionals to provide care in health personnel shortage areas. The Bureau provides services to older Americans through Community and Migrant Health Centers (C/MHCs or Centers), the National Health Service Corps, the Division of Federal Occupational and Beneficiary Health Services, the Home Health Demonstration Program, and the Health Care for the Homeless Program.

COMMUNITY AND MIGRANT HEALTH CENTERS

In fiscal year 1990, a total of 550 C/MHCs, located in medically underserved areas, provided a range of family-oriented, preventive, primary case managed care services to those who would otherwise lack access to care, particularly the poor and minorities. Approximately 5.6 million people were served, of which over 9 percent (or about 503,000) were age 65 or older.

The cooperative program between the Bureau and the Administration of Aging (AoA) is near completion. The purpose of the collaborative project is to improve the delivery of primary health care to older persons by establishing linkages among areas agencies on aging (AAAs), community and migrant health centers, and other types of health care agencies. Training was given to AoA and Primary Care Association (PCA) staff to assist them in developing statewide plans for health services to the elderly. An evaluation of the training that began in fiscal year 1989, has been completed.

The HRSA and AoA have conducted an evaluation of the activities under the collaborative project. The evaluation produced case studies on the development of linkages between the PCAs and the AAAs and statewide planning efforts. Findings of the case studies showed that financial barriers, particularly obtaining third party reimbursements from Medicare, were the major impediments to increasing elderly participation in C/MHCs. With respect to Medicare, these Centers indicated several barriers, such as the following: the level of reimbursement is not enough to cover costs of care, the cost of processing is too high relative to reimbursement, and administrators, in some instances, are not fully knowledgeable about processing for reimbursement.

The evaluation also indicated the desirability and acceptability of the linkages by the State, local and Federal agencies. Most of the AAAs and PCAs involved in the case studies have adopted agreements to improve the acceptability of services to the elderly by more thoroughly refining and marketing the services. The final report includes both an analysis of collaboration efforts, and a manual on enhancing Medicare reimbursement to community and migrant health centers. These documents will be useful to C/MHCs, AoA and others interested in collaborating on enhanced services for the elderly. It is planned to evaluate the manual on developing geriatric programs and enhancing Medicare reimbursements as a technical assistance document in C/MHCs with a large group of unserved elderly in their needs assessments and small numbers of elderly in the patient population.

THE NATIONAL HEALTH SERVICE CORPS

The National Health Service Corps places physicians, dentists, nurse practitioners, and other health professionals in health personnel designated shortage areas. Older Americans with special health needs and reduced mobility need primary care providers close at hand. The Corps works closely with C/MHCs, the Indian Health Service, the Federal Bureau of Prisons and other Federal agencies to provide assistance in recruiting and retaining health personnel for populations in need. Physical therapy, high blood pressure screening, stroke prevention and nutrition counseling are among the services provided to the elderly.

DIVISION OF FEDERAL OCCUPATIONAL AND BENEFICIARY HEALTH SERVICES

The Division of Federal Occupational and Beneficiary Health Services (DFOBHS) provides a variety of services related to health promotion and disease prevention in the elderly to managers and employees of over 3,000 Federal agencies. Retirement planning, care of aging parents, and prevention of osteoporosis are some examples of geriatric issues that are regularly addressed in educational seminars and counseling sessions provided by the Division's clinical and employee assistance programs.

HEALTH CARE FOR THE THE HOMELESS PROGRAM

In calendar year 1989, through the Health Care for the Homeless Program, primary health care, outreach, substance abuse, mental health and case management services were provided to 235,075 homeless individuals, of which 3 percent were aged.

HEALTH CARE IN THE HOME DEMONSTRATION PROGRAM

The Health Care in the Home Demonstration Program is targeted for low-income, highly vulnerable individuals who can avoid lengthy stays in hospitals and other institutions. The Bureau has awarded \$2.9 million in third year funding for this 3-year demonstration program. A multidisciplinary team approach is a central feature of the five-State program. The following is a detailed description of the project.

Project.—Health Care Services in the Home Demonstration 10/1/88-9/30/91.

The Bureau of Health Care Delivery and Assistance is awarding \$2.9 million in the third year of continuation funding under the Health Care in the Home Services Act. Total funding for the 3 years is \$10 million.

The project is continuing to demonstrate that many low-income, uninsured individuals at high risk for multiple hospitalizations or institutionalization can best be medically served in the home. The project has awarded funds to five State grantee agencies (Hawaii, Utah, North Carolina, South Carolina and Mississippi) to demonstrate and evaluate the Program. The grantees identified eligible recipients to participate in the program of which at least 25 percent of those receiving care are 65 years or older.

The demonstration program is oriented toward case management and service delivery. The multidisciplinary team approach remains as the primary focus of the program. It involves a comprehensive continuum of efficient, effective, and qualitative home care provided by a team of health professionals appropriate for each patient case. As part of the demonstration, North Carolina will be studying the role of the pharmacist as part of the multidisciplinary team. In the first year of funding, the grantees emphasized the design of their specific program. Primary focus was on formalization and start-up costs associated with a new program. The second year of funding primarily has entailed the implementation of services. During the third year, the five programs will be operating at full capacity.

A contract for the Demonstration program evaluation over the entire three years was awarded. The evaluator is responsible for data collection and analysis to permit a comparative review of the program. A second year technical assistance contract to provide assistance to the grantees for program development and implementation was also awarded and a third contract for the final 9 months is planned.

The Health Care in the Home Services Act program is demonstrating a State-administered centrally financed and locally operated public and private system of providing, coordinating, monitoring and evaluating a service delivery for in-home health care services.

BUREAU OF HEALTH PROFESSIONS

The Bureau of Health Professions (BHP) provides national leadership to improve the training, distribution, utilization and quality of personnel required to staff the

Nation's health care delivery system. BHPr assesses the supply of and requirements for the Nation's health professionals and develops and administers programs to meet these requirements. It also collects and analyzes data and disseminates information on the characteristics and capacities of health professions production systems. The Bureau develops, tests, and demonstrates new and improved approaches to the development and utilization of health personnel within various patterns of health care delivery and financing systems. BHPr provides financial support to institutions and individuals for health professional education programs, administers Federal grant programs for targeted health personnel development and utilization, and provides technical assistance to national, State, and local agencies, organizations, and institutions for the development, production, utilization, and evaluation of health personnel. These activities are carried out under the legislative authorities of Titles VII and VIII of the Public Health Service Act.

Fiscal year 1990 program activities contributing to the development of professional personnel to provide health care to the aged included:

- (1) Activities under training authorities targeted specifically for geriatric and gerontological education;
- (2) Activities under training authorities for primary care, nursing, and other health professionals where geriatric training may be provided as part of a broader educational emphasis; and
- (3) Data collection, studies, and other activities aimed at assessing and enhancing the qualifications of future health care providers to respond to the needs of the aged.

TARGETED SUPPORT FOR GERIATRICS

In fiscal year 1990, 33 Geriatric Education Centers (GECs) received grants under section 789(a) of the PHS Act, an authority which specifically authorizes geriatric training. Many centers are consortia or other organizational arrangements involving several academic institutions, a broad range of health professions schools, and a variety of clinical facilities.

The Centers are based at the following institutions: University of Connecticut, Farmington, CT; Harvard Medical School, Boston, MA; State University of New York at Buffalo, Buffalo, NY; Hunter College jointly with Research Foundation of CUNY, New York, NY; University of Medicine and Dentistry of New Jersey, Stratford, NJ; University of Pennsylvania, Philadelphia, PA; University of Alabama at Birmingham, Birmingham, AL; University of Mississippi Medical Center, Jackson, MS; University of Kentucky, Lexington, KY; University of Florida, Gainesville, FL; University of South Florida, Tampa, FL; Bowman Gray School of Medicine, Winston-Salem, NC; Duke University, Durham, NC; University of Miami, Miami, FL; Meharry Medical College, Nashville, TN; Case Western Reserve University, Cleveland, OH; Marquette University, Milwaukee, WI; University of Illinois, Chicago, IL; University of Minnesota, Minneapolis, MN; Indiana University, Indianapolis, IN; Baylor College of Medicine, Houston, TX; Louisiana State University, New Orleans, LA; University of Oklahoma, Oklahoma City, OK; University of New Mexico, Albuquerque, NM; University of Iowa, Iowa City, IA; Creighton University School of Medicine, Omaha, NE; Stanford University, Stanford, CA; University of Southern California, Los Angeles, CA; University of Hawaii at Manoa, Honolulu, HI; University of California, Los Angeles, CA; University of California, LaJolla, CA; University of Washington, Seattle, WA; and Oregon Health Science Center, Portland, OR.

Awards for these 33 GECs totaled \$9,171,500 for fiscal year 1990. Funding for fiscal year 1991 under Section 789(a) is expected to be approximately \$9.8 million. These Centers are educational resources providing multidisciplinary geriatric training for health professions faculty, students and professions in allopathic medicine, osteopathic medicine, dentistry, pharmacy, nursing, occupational and physical therapy, podiatric medicine, optometry, social work and related allied and public or community health disciplines. They provide comprehensive services to the health professions educational community within designated geographic areas. Activities include faculty training and continuing education for practitioners in the disciplines listed above. The Centers also provide technical assistance in the development of geriatric education programs and serve as resources for educational materials and consultation.

Awards were made in fiscal year 1990 for the third year in the grant program entitled, "Faculty Training Projects on Geriatric Medicine and Dentistry," authorized under section 789(b). There were 23 continuation awards totaling \$4.5 million. These awards provided geriatric faculty training experiences for 38 physician participants and 26 dental participants through 2-year fellowship programs and 1-year

retraining projects. The training content included clinical, teaching, administrative and research skills pertaining to geriatric medicine and dentistry.

GERIATRIC ACTIVITIES SUPPORTED UNDER BROADER TRAINING AUTHORITIES

DIVISION OF ASSOCIATED AND DENTAL HEALTH PROFESSIONS

The Bureau's Division of Associated and Dental Health Professions funds education projects for a wide array of health providers. The General Dentistry training grant program currently supports 35 postdoctoral residency and advanced education programs in dentistry, which include training opportunities to provide dental care to the elderly. In awarding those grants, a funding priority was given to applicants who proposed to further expand and improve the geriatric training components of their postdoctoral programs. Eighty-six percent of the approved general dentistry applicants addressed the special geriatric training priority.

A working group of practicing and academic health professionals was convened to address issues concerning geriatric training as it relates to public health professionals. The group developed a short-term intensive curriculum for use by providers responsible for services to future geriatric populations. The curriculum is ready for use by public health personnel. Copies of the curriculum module will be made available to schools and health agencies during the coming fiscal year.

The grant program of Interdisciplinary Training for Health Care for Rural Areas has as one of its goals improving access to and availability of health care for the residents of rural communities. A funding priority for this grant program is given to applicants who include curriculum elements that address the uniqueness of health conditions and the ethnic/cultural characteristics of the populations within the rural areas where training/service is occurring. This provision includes the health of older Americans, and is reflected generally in funded projects.

Another new grant program, Special Projects Grant Program to Schools of Public Health, has identified geriatric training and education issues as an area for special consideration. A grant to the University of Illinois at Chicago School of Public Health entitled "Health Promotion for Aging Populations" is developing educational programs for public health professionals concerned with minority aging programs for the City of Chicago.

Under section 788(b), The Model Education Projects grant program is intended to provide for the development and implementation of model projects in areas such as faculty and curriculum development and the development of new clinical sites. This program gave a priority to proposals that are sensitive to the needs of special populations, including the chronically ill and minority aged:

A grant to Ohio State University will develop, pilot test, and integrate into existing curricula an ambulatory chronic care educational program for physicians, nurses and allied health personnel.

An award to the University of Illinois at Chicago School of Dentistry will develop a model program to enhance and test dental students' skills in geriatric dentistry through the use of standardized patients.

An award to the University of Maryland, Baltimore will develop an educational model to train students to view health care needs of the elderly from a global, multidisciplinary perspective.

A grant to George Washington University in Washington, D.C. will develop a model computer assisted curriculum module in geriatrics for medicine, nursing, health policy, and physicians assisting.

Allied Health Special Project grants under section 796 of the PHS Act have several purposes related to the aged: number 2—"to improve and expand enrollment in professions with greatest demand and most needed by elderly"; number 3—"interdisciplinary training programs that promote allied health in geriatrics and rehabilitation of elderly"; number 5—"adding and strengthening allied health curriculums in prevention and health promotion, geriatrics, long-term care, home health and hospice care, and ethics." Four of the seven Allied Health Special Project grant awards for fiscal year 1990 include program activities in geriatrics. Several of these grant programs include activities to strengthen academic and clinical curricula in the areas of geriatrics and long term care, and to increase the geriatric knowledge and skills of their didactic faculties. One program's activities include expanding an existing clinical organization of a health service clinic to develop a wellness clinic for senior adults.

DIVISION OF MEDICINE

The Division of Medicine continues to support through its grant and cooperative agreement programs significant educational and training initiatives in geriatrics. A total of \$7,553,971 was awarded during fiscal year 1990 for these efforts, which are estimated to have an impact on the training of 4,666 individuals.

Seventeen predoctoral grantees and 106 graduate program grantees under section 786(a)—Family Medicine Training—indicated that they are actively involved in the development, implementation and evaluation of their geriatrics curriculum and training. Two of the predoctoral grantees received funds totaling \$152,591, and 30 of the residency program grantees received funds totaling \$1,828,492 specifically for developing and enhancing geriatrics curriculum and training experience. These efforts will benefit 55 predoctoral students and 1,022 residents. In addition, 28 faculty development programs reported that they provided geriatrics training, benefitting an estimated 1,599 faculty. Six of the section 780 Family Medicine Departments program grantees received awards totaling \$450,887 for the purpose of strengthening geriatric training and carrying out research activities in this area.

Under section 784, the General Internal Medicine and General Pediatrics Residency Training programs reported 38 grantees who provided geriatric medicine training to approximately 268 residents. A total of \$130,251 was awarded among 8 of the programs for their efforts. In addition to graduate training, 4 grantees under the faculty development program indicated that their geriatric emphasis would have an impact on about 24 faculty, but no specific funds were received for these activities.

The Area Health Education Center (AHEC) program (section 781) awarded a total of \$344,409 to the 4 AHECs which indicated emphasis in geriatric education. These educational and training activities will benefit approximately 706 students and trainees. In addition, 4 AHECs received special initiative awards for programs targeted to health care issues of the elderly, including the reduction of substance abuse and medication mismanagement, treatment compliance, and to provide enhanced training experiences for residents in rural areas.

All 38 Physician Assistant Training program grantees have instituted training activities in geriatrics. Funds in the amount of \$107,675 were awarded among 13 of the grantees specifically for their efforts in this area. This will have an impact on an estimated 2,486 trainees.

Nine grantees receiving support for Podiatric Primary Care Residency Training under section 788(e) authority have included curricular emphasis in geriatric health which will benefit an estimated 41 residents. These grantees received a total of \$39,666 for this purpose.

DIVISION OF NURSING

The Division of Nursing continues to administer grants awarded through four programs: (1) Advanced Nurse Education, (2) Nurse Practitioner and Nurse-Midwifery, (3) Special Projects, and (4) Professional Nurse Traineeships. The fourth program provides funds to schools which allocate these funds to individual full-time master's and postmaster's nursing students who are preparing to be administrators, educators, researchers, nurse-midwives, nurse practitioners, nurse anesthetists, or other types of nurse specialists.

Activities relating to the aging in each of these programs during fiscal year 1990 include:

Advanced Nurse Education Program

- The Advanced Nurse Education authority supported 9 grants totalling \$1,227,442 for gerontological and geriatric nursing concentrations in programs leading to a master's or doctoral degree in nursing during the fiscal year.

Nurse Practitioner and Nurse-Midwifery Program

- Fifteen master's or postmaster's gerontological nurse practitioner programs received grant support totalling \$1,782,906.
- Twenty-eight family nurse practitioner master's programs, which contain content related to care of older persons were funded through grants in the amount of \$4,442,914.
- Two obstetrics/gynecology nurse practitioner master's programs, which contain content related to the care of women through old age, received grant support totaling \$152,099.

SPECIAL PROJECTS PROGRAM

The Special Project grant program supported 23 projects, amounting to \$2,621,772, which were related to gerontological nursing. In addition, the interagency agreement with the National Institute on Aging to assist in carrying out a project to identify health care behaviors practiced by community based elderly persons was continued in the amount of \$50,000.

The nursing shortage Reduction and Education Extension Act of 1988 requires that 20 percent of program funds be used for projects dealing with geriatric nursing. In fiscal year 1990, \$2,545,000 was spent on projects with a primary geriatric focus.

The grants continue to support efforts in the community as well as in institutions. Specific activities relate to support of target minority groups including rural black elderly females, a Navajo patient/family teaching program, and a project to teach Indian nursing home personnel. Several projects address continuing education for registered nurses and other nursing personnel while others combine clinical experience with care of elderly persons in rural settings.

PROFESSIONAL NURSE TRAINEESHIP PROGRAM

A total of 4,885 traineeships were supported through this program. Of this number, 80 were for study in geriatric nurse practitioner programs and 93 additional traineeships were given to students who majored in care of aging persons. This represents approximately 3 percent of the total number of traineeships.

OFFICE OF RURAL HEALTH POLICY

The Office of Rural Health Policy (ORHP) serves as the focal point within the Department for coordinating nationwide efforts to strengthen and improve the delivery of health services to populations in rural areas. In particular, the Office advises the Secretary on the effects that the Medicare and Medicaid programs have on access to health care by rural populations, especially with regard to financial viability of small rural hospitals and the recruitment and retention of health professionals; coordinates rural health activities within the Department and with other Federal agencies, States, national organizations, private associations and foundations; administers a national grant program that establishes rural health research centers; provides staff assistance to the National Advisory Committee on Rural Health; and ensures that the Department invests adequate resources into research projects on rural health issues.

Aging-related issues are of particular importance to the Office of Rural Health Policy. One-third of the Nation's elderly live in rural areas and rural counties have, on the average, a higher percentage of their population over 65 years of age than their urban counterparts. These demographics create a situation in which rural hospitals, because they are increasingly dependent upon admissions of the elderly (i.e., Medicare beneficiaries), are especially vulnerable to the PPS payment formula.

Activities and initiatives of the ORHP which affect the rural elderly include:

- providing an impact analysis to the Health Care Financing Administration on proposed and final regulations which are expected to have a significant impact on small rural hospitals and the rural elderly that they serve;
- coordinating activities with the Bureau of Health Professions and the Bureau of Health Care Delivery and Assistance relating to the development and utilization of rural health professionals.
- meeting with personnel in other Federal agencies (e.g., the Alcohol, Drug Abuse and Mental Health Administration and the National Highway and Traffic Safety Agency) to work on issues which affect the health and health care access of rural elderly; and
- apprising interest groups, such as the National Council on the Aging and the American Association of Retired Persons, about ORHP and its activities.

The Subcommittee on Health Services of the National Advisory Committee on Rural Health designated the needs of the rural elderly as one of three priority areas. One particular area of concern is the barrier to access that results from the lack of coordination in Federal policies. The subcommittee will be considering access to health care for the elderly during 1991.

Since 1989 the Office has awarded grants to seven rural health research centers to conduct applied research, case studies and analyses focusing on the delivery, financing, organization, and management of rural health and care services. The Centers provide data and policy research capabilities on a wide range of rural health concerns, including areas relevant to the elderly. Grants were awarded to: Rural Health Office of the Arizona Health Education Center, College of Medicine, Univer-

sity of Arizona, Tucson, AZ; Health Services Research Center University of North Carolina, Chapel Hill, NC; Center for Rural Health Services, Policy on Research, University of North Dakota, Grand Forks, ND; WAMI Rural Health Research Center, University of Washington, Seattle, WA; Marshfield Medical Research Foundation, Marshfield, WI; Department of Community Health and Preventive Medicine, Morehouse School of Medicine, Atlanta, GA; and Department of Preventive and Societal Medicine, University of Nebraska Medical Center, Omaha, NE.

To enhance the dissemination of information on rural health, an interagency agreement with the U.S. Department of Agriculture (USDA) was signed in January 1990. It provides for the placement of the Rural Information Center in the USDA's National Agricultural Library. This Rural Information Center Health Service (RICHS), as it is called, commenced operations on October 1, 1990. For access to the center, call 1-800-663-7701.

ACTIVE CONTRACTS
UNDER TITLE VII AND VIII OF THE PUBLIC HEALTH SERVICE ACT

Project	Funding FY 1990
240-90-0002 University of South Florida 4202 Fowler Avenue Tampa, Florida 33620	
"Sixth Workshop for Key Staff of Geriatric Education Centers (GECs)"	
Eric Pfeiffer, M.D. (813) 974-4355 3/12/90-3/11/91	\$90,728

The purpose of this contract was to plan, develop, and conduct a workshop, including logistical support, to enable key staff from both long-existing and newly established Geriatric Education Centers (GECs) to interact, exchange information, share strategies and jointly plan needed actions to accomplish GEC purposes. Based on actions taken in five previous workshops, further cooperative efforts were explored and implemented. Also cooperative efforts with other existing geriatric resources such as geriatric assessment units, CHCs, GRECCs, and AHECs were incorporated into the workshop objectives. Proceedings of the workshop will be available Spring, 1991.

Project**Funding
FY 1989**

240-89-005
University of California, Los Angeles
405 Hilgard Ave.
Los Angeles, CA 90024-1406

"Study of the Adequacy of the Supply of Geriatric Faculty at all Levels of Medical Education"

Brenda Selser
(301) 443-6785
12/29/88-12/29/89

\$169,568

This study compiled and analyzed information on the adequacy of the current and future supply of geriatric faculty at all levels of medical education, i.e., undergraduate, residency, fellowship and continuing medical education, needed to prepare practitioners to meet the essential health care needs of the elderly. Findings are incorporated in a Report to Congress on the Medicare Exception for Geriatrics and the Adequacy of the Current and Future Supply of Geriatrics Faculty.

Project**Funding
FY 1988**

240-88-0030
Trustees of Boston University
80 E. Concord St.
Boston, MA 02118-2394

"Analysis of Issues Related to Exceptions to Limits to Medicare Reimbursement for Geriatric-related Graduate Medical Education"

Brenda Selser
(301) 443-6785
06/30/88-10/28/89

\$221,868

This study reported on the advisability of continuing or terminating the exception of the limitation of Medicare direct graduate medical cost reimbursement for initial residency periods in approved medical residency training programs. This study also provided information on the adequacy of current graduate training programs in geriatrics covering all primary care specialties that train physicians to provide services to the elderly and findings are included in a Report to Congress on the Medicare Exception for Geriatrics and the Adequacy of the Current and Future Supply of Geriatrics Faculty.

Project**Funding
FY 1988**

240-88-0034
 Boston University Medical Campus
 Office of Sponsored Programs
 80 E. Concord St.
 Boston, MA 02118-2394

**"Geriatric/Gerontology Curriculum for Preventive Medicine Residency
 Training Programs"**

Glen R. Taylor
 (301) 443-6820
 06/30/88-07/31/90

\$282,529

This contract was awarded for development of a geriatrics/gerontological curriculum module for preventive medicine residency training programs. The project developed curriculum modules that provide the knowledge, skills and attitudes that preventive medicine residents will need to design, implement, direct and maintain preventive services for the elderly. The curriculum was field tested in three residency program, including one based in a health department. Resulting training materials will be distributed in the future to all general preventive medicine and public health residency training programs.

Project**Funding
FY 1988**

240-88-0013
 Education Development Center, Inc.
 55 Chapel St.
 Newton, MA 02160

**"Development and Implementation of a Continuing Education Program
 to Prepare Practicing Nurses in Discharge Planning of Elderly
 Patients from Acute Care Settings"**

Cheryl J. Vince
 (617) 969-7100
 06/21/88-12/21/89

\$179,665

This short-term training program for registered nurses in continuing care and discharge planning for elderly patients was developed and carried out in partnership with Beth Israel Hospital of Boston, Massachusetts. This project focused on coordination of patient services before, during and after hospitalization and transition between each stage of care.

Project**Funding**

FY 1988

University of North Carolina at Chapel Hill
Chapel Hill, NC 27599-7490

"Self-care Assessment of the Community-based Elderly" (Interagency Cooperative Agreement between the Division of Nursing and the National Institute on Aging)

Dr. Gordon H. DeFriess
(919) 966-5011
08/05/88-08/04/91

\$200,000

The project will provide a national sample database on self-care behaviors practiced by elderly persons in the U.S. not living in long-term care facilities. The database will be useful to a number of health and health related professions and service organizations whose efforts are directed toward assisting the elderly to continue to live in non-institutional settings for the maximum possible time through cost-effective health promotion and disease prevention interventions.

Project

Funding
FY 1987

240-87-0042
Technical Resources, Inc.
3202 Monroe Street
Rockville, MD 20852

"Evaluation of Ongoing Development and Impact of PHS Funded Geriatric Education Centers"

Joel Ann Todd
(301) 231-5250
09/30/87-02/28/89

\$131,909

This study assessed effectiveness of the Geriatric Education Center (GEC) Grant Program as an approach to achieving national geriatric education objectives, and provided information related to program policies and approaches taken by various Geriatric Education Centers (GECs) prior to expiration and possible modification of the authorizing legislation. The contractor analyzed existing information comparing the 31 centers funded in FY 1987 in terms of a number of variables and obtained further information from a sub-set of nine centers to assess the impact of alternative approaches. The study considered several overarching questions raised in a 1986 study and focused on the validity of faculty development efforts in furthering geriatric education. No report was published.

Project

Funding

FY 1987

240-87-0043
Technical Resources, Inc.
3702 Monroe Street
Rockville, MD 20852

"Geriatric Training Institute for Public Health Professionals"

Joel Ann Todd
(301) 231-5250
09/30/87-09/30/89

\$225,154

This project convened a working group of practicing and academic public health professionals to identify issues and content concerning geriatrics as it relates to public health professionals; developed an intensive short-term curriculum using leaders in public health involved with geriatrics education; pilot-tested the curriculum; and developed strategies and plans for implementing future training sessions for public health personnel. The result of the project was a prototype Geriatric Training Institute including a cogent curriculum to address the issues and content necessary for public health professionals to plan, develop, manage, and evaluate programs intended to provide services for the future geriatric population. The Geriatric Training Institute was designed to complement the Geriatric Education Centers grant program administered by the Bureau of Health Professions, HRSA. While Geriatric Education Centers focus upon medicine, nursing, and allied health professions, this project focused upon public health personnel, a vital component of the health workforce in combating growing geriatric health care problems. The publication "Geriatric Training Curriculum for Public Health Professionals" is available from Mr. Ronald Merrill, Division of Associated and Dental Health Professions.

Project**Funding
FY 1987**

240-87-0071
 Baylor College of Medicine
 One Baylor Plaza
 Houston, TX 77030

"Fourth Workshop for Key Staff of Geriatric Education Centers (GECs)"

Robert Rousch
 (713) 799-4611
 09/29/87-05/01/89

\$97,605

This fourth workshop in a series for key staff of Geriatric Education Centers (GECs): (1) identified strategies for accomplishing programmatic functions of GECs; (2) identified and assessed issues and solutions in the management and organization of GECs; and (3) stimulated the improvement of services to target populations. No report was published.

Project**Funding
FY 1987**

240-87-0051
 The Circle, Inc.
 8201 Greensboro Drive, Suite 600
 McLean, VA 22102

"National Conference on Geriatric Education"

Kathleen M. Corrigan
 (703) 821-8955
 09/30/87-01/30/90

\$245,836

A National conference was held to provide a national forum to address the interdisciplinary training of health professionals involved in care of the elderly. This allowed national leaders in geriatrics and geriatric education to present and discuss pertinent issues and approaches. Resulting recommendations included strategies to enhance the interdisciplinary collaborative effort of caring for the elderly. Publication "Rehabilitation and Geriatric Education: Perspectives and Potential, January 1990" is available from NTIS.

Project**Funding
FY 1987**

240-87-0066
 Bogan Associates, Inc.
 1110 Fidler Lane, Suite 516
 Silver Spring, MD 20910

"Minority Aging and Geriatric Education Programs for the Health Professions"

Phyllis W. Ford
 (301) 588-0132
 09/30/87-08/01/88

A working conference brought together approximately 25 nonFederal individuals with recognized expertise in minority/aging issues, educators who are now undertaking work to respond to the absence of curriculum materials or exemplary learning experiences related to these concerns, approximately 25 Federal staff of programs assisted such efforts, and a few private and public sector health leaders involved with these issues. Discussion of the status of the development of knowledge and experience with new educational approaches to ethnicity and aging focused on possibilities for collaboration and new directions for educational programs. In addition to providing results to health professions schools, this conference resulted in a publication on curriculum concerning race, ethnicity and aging for selected health professions. The publication "Minority Aging: Essential Curriculum Content for Selected Health and Allied Health Professions" is available from Dr. Clay Simpson, Division of Disadvantaged Assistance.

Project

Funding
FY 1988

240-88-0066
Midwest Geriatric Education Center
Marquette University
604 North 16th Street, Room 020H
Milwaukee, WI 53233

"Fifth Workshop for Key Staff of Geriatric Education Centers"

Jesley Ruff, D.D.S.
(414) 224-3712
09/30/88-11/30/89

\$74,148

The purpose of this contract was to plan, develop, and conduct a workshop, including logistical support, to enable key staff from both long-existing and newly established Geriatric Education Centers (GEC) to interact, exchange information, share strategies and jointly plan needed actions to accomplish GEC purposes. Based on actions established by the four previous workshops, such as task forces on linkage building, curriculum development, issues and trends, and evaluation -- further cooperative efforts were explored and implemented. Also, cooperative efforts with other existing geriatric resources - i.e., geriatric assessment units, CHCS, GRECCS, AHECs were incorporated into the workshop objectives. No publication is available.

Project

Funding
FY 1988

HRSA 88-376(P)
Harvard College
Holyoke 440, 1350 Massachusetts Avenue
Cambridge, MA 02138

"Training Needs of the Practicing Dentist in Geriatric Dentistry"
Gerard C. Kress, Jr., Ph.D.
(214) 828-8431
07/21/88-01/24/89

\$22,047

This project called for collection and categorization of the various materials and training methods used to provide continuing dental education to practicing dentists. A committee of experts in continuing dental education and experts in geriatric dentistry, using published data on the knowledge requirements for treating the geriatric dental patient, established criteria for what knowledge and skills are required by a dentist to treat older persons. The committee then tested the collected information on presently available geriatric CDE against the established criteria to determine what areas of geriatric CDE require improvement. The committee then determined what the best methods would be for providing the practicing dentists with information on treating older persons. No publication is available.

NATIONAL INSTITUTES OF HEALTH

NATIONAL INSTITUTE ON AGING

I. INTRODUCTION

The research agenda of the National Institute on Aging (NIA) encompasses the full scientific spectrum—from the basic biology of cell growth to the study of exercise physiology in older people. NIA seeks new understanding of the complex and various ways that people age or are affected by social attitudes or conditions. The Institute's portfolio includes studies of specific disorders that disproportionately affect older people. NIA-funded research is improving our understanding, diagnosis, and treatment of Alzheimer's disease (research results are described in a separate report). In addition, NIA recently funded clinical trials that will identify interventions to reduce frailty and the incidence of falls in older people. The Institute's Claude D. Pepper Geriatric Research and Training Centers provide support and career opportunities for those interested in practicing geriatric medicine or conducting clinical aging research.

Other NIH institutes supporting aging research are the National Cancer Institute (NCI); the National Heart, Lung, and Blood Institute (NHLBI); the National Institute of Dental Research (NIDR); the National Institute of Diabetes and Digestive and Kidney Diseases (NIDDK); the National Institute of Neurological Disorders and Stroke (NINDS); the National Institute of Allergy and Infectious Diseases (NIAID); the National Eye Institute (NEI); the National Institute of Environmental Health Sciences (NIEHS); the National Institute of Arthritis and Musculoskeletal and Skin Diseases (NIAMS); the National Institute on Deafness and Other Communications Disorders (NIDCD); the National Center for Research Resources (NCRR); the National Center for Nursing Research (NCNR); and the Office of the Director (OD).

II. CURRENT RESEARCH PRIORITIES

A. ALZHEIMER'S DISEASE

1. NIA Research Advances

There is perhaps no other affliction that rivals Alzheimer's disease (AD) in its impact on the family and cost to society. It has been called the quintessential long-term care issue because of the disease's enduring nature and the breadth of health and social services required to deal with it. Victims can live for 20 years or more with this progressive illness as their mind and eventually their capacity for life itself gradually erodes—all the while bankrupting the families who provide their care.

Four million older Americans currently suffer from AD. Considering that the incidence of this disease increases dramatically with age, and that our population itself is aging, this nation's ability to conquer AD is a national imperative.

The battle is being fought on a number of research fronts. The "troops" include NIA, the National Institute of Neurological Disorders and Stroke (NINDS), the National Institute of Allergy and Infectious Disease (NIAID), the National Center for Research Resources (NCRR), and the National Center for Nursing Research (NCNR).

Alzheimer Centers Speed Research Progress

Many of the research advances reported this year are made possible through the concerted efforts of NIA's 15 Alzheimer's Disease Research Centers (ADRCs). These Centers, located in major medical institutions across the country, support a multidisciplinary research program in AD. Each ADRC has an administrative, clinical, neuropathology, and education and information transfer core. The Centers network is critical to carrying out the large-scale, high quality clinical trials needed to get effective treatments into the hands of Alzheimer patients and their physicians.

Many of the ADRCs build upon existing resources within their institutions funded by the NCRR, whose research contributions are described later in this report.

Scientists Unravel Clues to Alzheimer Plaques and Tangles

Research on the fundamental biology of AD has been productive this past year. The hallmark pathological features seen at autopsy, amyloid plaques and neurofibrillary tangles (NFT) within the brain, have revealed a complex and intriguing biochemistry. Specifically, a number of clues have emerged concerning the beta-amyloid plaques known to accumulate in the brain of people with AD. Beta-amyloid is a protein molecule that is part of a larger molecule called the amyloid precursor pro-

tein (APP), one form of which resides in the cell membrane. In the last year, a great deal has been discovered about the structure and function of the normal APP molecule in various cells of the body, and how it may be abnormally processed in AD.

Beta-amyloid has been shown to be the product of abnormal cutting of the APP molecule. This has been demonstrated by scientists at Athena Neurosciences in San Francisco, CA, and Eli Lilly & Co. in Indianapolis, IN, as well as by Dr. Donald Price and colleagues at The Johns Hopkins University ADRC. Mechanisms of protein degradation and processing seem to have gone away in the formation of amyloid, for reasons we do not yet understand.

Candidates for proteins involved in the abnormal cutting of the APP molecule include proteases (substances that degrade protein) normally found only in the cell's lysosomes, which are involved with cellular digestion. Dr. Ralph Nixon and colleagues at Harvard University in Boston have found active lysosomal proteases surrounding amyloid plaques in the AD brain, which can be released by factors acting at the cell membrane.

In addition, Dr. Dennis Cunningham and colleagues at the University of California at Irvine have identified a potential role for protease nexin 1 (PN-1) which inhibits or reduces the activity of thrombin, a substance needed for blood clotting. Because levels of available PN-1 are substantially reduced in the brain of a person with AD, thrombin could play a part in the formation of Alzheimer neuropathological features, including amyloid. The reduction in PN-1 implies a reduced ability to inhibit thrombin in the brain. Thrombin has been shown by Dr. Gregory Cole and colleagues at the University of California ADRC in San Diego to stimulate the release of beta-amyloid-containing form of the APP molecule from platelets, and neurons apparently contain thrombin receptors as well.

This research has strengthened interest in the idea that brain amyloid may have a circulatory origin, as suggested by an earlier observation of Dr. Dennis J. Selkoe and colleagues at the Harvard ADRC in Boston, MA, who found material similar to amyloid in the skin of Alzheimer patients.

Neuropathology of the cytoskeleton, or the cell's dynamic internal framework, is a prominent feature in the brain of people with AD, and it is under active investigation at numerous laboratories. Disturbances in cytoskeleton function can impede the flow of necessary materials, including messages and nutrients to the nerve endings. Such disturbances could affect energy metabolism, structure of nerve cell endings, and the ability of these cells to form new connections. Scientists think that cytoskeletal abnormalities represent a state in the death of nerve cell processes and may correlate most closely with the patient's degree of dementia.

The hallmark cytoskeletal defect in AD is the presence of NFTs within nerve cell processes. NFTs apparently consist largely of abnormal forms of cytoskeletal protein (originally identified by NIA grantee Dr. Peter Davies and colleagues at New York University) which takes the form of paired helical filaments (PHF) or twisted fibers. Drs. Virginia Lee and John Trojanowski and colleagues at the University of Pennsylvania have recently obtained data which increase the likelihood that the proteins which compose PHF are actually altered forms of a cytoskeletal protein known as "tau", and that at least part of the mechanism of converting normal tau to PHF tau is protein phosphorylation. Phosphorylation is the process by which phosphorous is coupled with other compounds. The sites on the protein where phosphorylation occurs and the enzymes involved in this process have still not been identified. Proof of the mechanism of PHF generation awaits test-tube conversion of normal human tau to PHF.

A major unanswered question in AD is the cause of neuronal dysfunction and eventual death of neurons. This may ultimately be the most important question, since it speaks to irreversible damage to the brain. A long-standing question in AD research has been whether the amyloid plaques and NFTs represents causes or only parallel symptoms of some undetected neuronal disease process. Recently, the amyloid beta protein was shown by Dr. Bruce Yankner and colleagues at Harvard University to have both growth-promoting and toxic effects on rat neurons in cell culture, depending on the developmental stage of the cells and the concentration of the protein. In cultures of normal cells from the brain's hippocampus (a structural severely affected in AD), beta amyloid was a thousand time more toxic than glutamate, a chemical long suspected to be involved in neurodegenerative diseases. These observations suggest that beta amyloid could normally function at low concentrations as a trophic or growth-promoting factor during cell development early in life, but that accumulations of amyloid in a mature brain may lead to nerve cell degeneration.

In addition, these researchers have identified an active portion of the beta amyloid protein, closely resembling a chain of amino acids found in a family of chemi-

cals called tachykinins which are widely distributed in the nervous system. This segment of the protein, by itself, was sufficient to exert these degenerative effects. Administration of tachykinins, however, completely blocked the effects of beta amyloid, whereas antagonists (substances that nullify the action of tachykinins) mimicked those effects. Beta amyloid may act at cell receptors (proteins on the cell surface) which normally responds to tachykinins, and tachykinin-related chemicals may find therapeutic application in the treatment of AD.

Environmental Toxins May Provide Insights into Mechanisms of Alzheimer's Disease

Cross-cultural epidemiological studies may teach us valuable lessons about risk factors for AD, including exposure to aluminum. Under the direction of Dr. Leonard Kurland with colleagues at the Mayo Clinic in Rochester, MN, the Mount Sinai Medical Center in New York City, and the University of Guam, a study is underway on the Island of Guam to determine the prevalence of neurological disorders of late life. This population was the object of intense investigation for more than 30 years due to a constellation of diseases that affected motor and cognitive functioning in older adults. It was thought for some time that these diseases had disappeared. However, there is new and preliminary evidence that the Guamanian population is still experiencing an epidemic of late-life neurological disease. Kurland hopes to clarify the relationships between environmental toxins and the onset of disease, with an aim to develop ways to interrupt the course or treat the symptoms.

The Quest for Genetic Link

Although research on the cause of AD has not yielded any definitive answers, substantial progress has been made in a number of areas. These include the search for suspect genes and gene products that may play a role in the cell deterioration of AD. Scientists continue to pursue cases where the disease runs in families. While most cases of AD occur sporadically and are probably not inherited, investigators believe that finding a gene for a familial form of Alzheimer's disease (FAD), would shed light on other potential causes.

On that basis, intensive efforts are underway to confirm potential linkages between early-onset FAD (disease that occurs prior to age 65) and genes on chromosome 21. In the past, researchers at the Harvard Medical School/Massachusetts General ADRC reported such a linkage. However, a large early-onset family study by researchers at the University of Washington ADRC in Seattle showed no link to chromosome 21. Currently, Dr. Allan Roses and investigators at the Duke University ADRC in Durham, NC report the tentative relationship between a gene on chromosome 19 and late-onset FAD (disease appearing after age 65). To confirm this finding, the Duke investigators are exchanging blood samples from FAD patients and families with scientists at the Harvard and University of Washington ADRCs. Studies such as these will help clarify the genetic contribution in AD. (This is further discussed in the NINDS section of this report.)

In this connection, Dr. Blas Frangione and colleagues at New York University in New York City have identified the probable genetic mechanism for another inherited disease in which beta amyloid accumulates in the brain, leading to fatal strokes. Frangione has shown that the cause of this inherited disease is probably a mutation of a single base (one of the four molecules that make up DNA) within the amyloid portion of chromosome 21. This mutation apparently reduces the effectiveness of normal proteolytic processing, suggesting a potential mechanism by which amyloid may form. The significance of this discovery for AD lies in the fact that other factors besides the amyloid gene sequence itself are involved in amyloid processing. Research is focusing on the identification of the other factors which might contribute towards nonvascular brain amyloid, including proteases and phosphorylation enzymes.

A large-scale effort begun this year is the establishment of a National Cell Bank to collect information on family histories and blood samples from affected families. The need for such an extensive effort is based on the fact that information on family pedigrees is notoriously difficult for individual researchers to obtain, and the reliability of research findings depend on amassing large numbers of suspect families. The Cell Bank utilizes the talents of Dr. Michael P. Conneally at Indiana University in Indianapolis, and the technical expertise and resources of staff at the Duke ADRC. Conneally was recruited to direct this effort because of his success in establishing national cell banks for other major disorders including Huntington's disease. The Cell Bank will serve as an important resource, not only for ongoing genetic research, but for attracting new talent to attack the problems of AD.

Update on THA Study

The 2-year clinical trial to test the drug THA was halted earlier this summer. Principal investigators, Dr. Kenneth Davis at Mt. Sinai Medical Center in New York City and Dr. Leon Thal at the University of Southern California in Los Angeles, noted that there were a sufficient number of patients enrolled in the study to evaluate the drug. THA or tetrahydroaminocridine is a chemical that blocks the otherwise fast breakdown of acetylcholine in the Alzheimer brain. The study was designed to test its safety and effectiveness in 300 patients. However, in the interest of getting this important information to the public, data on the first 200 patients is being analyzed and the investigators hope to report their findings in a major medical journal by year's end. While the investigators caution that stopping the study by no means indicates the drug is either effective or ineffective, the Institute is hopeful that some benefit will derive from it and that the study will pave the way for further testing of the many compounds that show potential for the treatment of AD.

Multicenter Program Establishes a National Registry on Alzheimer's Disease

In the absence of a clearcut cause or marker to distinguish persons with AD, efforts continue to improve on the diagnosis. The NIA Consortium to Establish a Registry for Alzheimer's Disease (CERAD) comprises physicians and scientists at 22 university medical centers who are attempting to develop uniform methods to evaluate Alzheimer patients. Without uniform assessment methods, scientists have been left to develop their own diagnostic criteria and evaluation methods, making it difficult to share their knowledge about AD. Sharing and comparing results among research investigators is essential to conquer this complex and puzzling disorder.

Now in its fifth year of operation, CERAD has enrolled over 700 Alzheimer patients and 500 other, healthy participants. Healthy participants are needed to (1) distinguish between the changes caused by normal aging versus AD, and (2) to reveal differences between the two groups that might provide clues as to who is at risk for the disease. Patients will be followed from their entry into the study until their death to learn how brain tissue and mental function change with normal age and throughout the course of AD.

In addition to pursuing CERAD's initial objectives, opportunities are planned for special studies. These include collecting information about AD in minorities, and developing foreign language renditions of CERAD test instruments. Information is now being collected on black and Hispanic Americans. With the assistance of foreign collaborators, CERAD instruments have been translated into Dutch and French. Spanish versions were produced by CERAD participants at the University of Southern California. The ability of these instruments to assess persons of different ethnic origins and with varying educational level is being explored. Instructional videotapes teaching clinicians how to use the test package are being developed in different languages.

Abbreviated Findings from CERAD Study

With 5 years' experience to draw from, CERAD is beginning to yield some preliminary findings. One recent report finds that the test of delayed recall—a word list recalled by the patient after a period of time has elapsed—is the best measure for distinguishing early cases (mildly demented) from normal participants. This finding was reported by Dr. Kathleen Welsh and colleagues at the Duke ADRC.

Dr. Chris Clark and colleagues, also at Duke, report that neuropsychological test performance correlates with brain atrophy shown with magnetic resonance imaging (MRI), a type of scan that produces images of the brain.

A cooperative effort among CERAD investigators finds one mental status test superior to others in detecting change in severely demented patients. Comparing three widely used tests, Dr. David Salmon at the Veterans Administration Medical Center in San Diego and colleagues at the University of Southern California, found that the Mini-Mental State Exam (MMSE), the Dementia Rating Scale (DRS), and the Information-Memory-Concentration test (IMC), often called the Blessed Memory scale, are equally effective for evaluating early to middle stage AD. Only the DRS was sensitive enough to follow the progression of severely demented patients. Using any of the three tests the researchers noted that the average rate of decline in year one did not bear any relationship to the rate at which the disease progressed by the third year. The findings suggest that a patient's rate of decline in the first year may not be useful in predicting how rapidly the disease will progress.

PET Scans May Identify Alzheimer Subgroups; Predict Symptoms

Intramural scientists at NIA's Laboratory of Neurosciences (LNS) directed by Dr. Stanley Rapoport are gaining new insight into the diversity of AD through the use

of Positron Emission Tomography (PET), a brain scanning process which measures brain metabolism and cerebral blood flow.

LNS researchers Dr. Cheryl Grady and colleagues have found that metabolic changes, as measured by PET, precede the appearance of neuropsychological deficits (impairment of thought processes) in Alzheimer patients by anywhere from a few months to a few years. Knowing the pattern of metabolic deficits allows the researchers to accurately predict the types of functional problems that eventually emerge.

The scientists followed a group of early-stage Alzheimer patients through the course of the disease. Although these patients showed similar problems with memory, PET scans indicated that certain patients had metabolic deficits that were more prominent in either the left or right side of the brain. Those patients who had specific metabolic deficits in the left side of the brain, which controls language processes, went on to develop communication difficulties. Patients who had damage predominantly on the right side of the brain later developed specific problems in processing visual-spatial information (placement of objects in the environment). Patients with visual-spatial impairments may have difficulty negotiating their environment, remembering how to find their way in familiar surroundings, or pairing a name with a face, etc.

The researchers were able to place patients into four subgroups based on PET scan readings. One group of patients, representing about 50 percent of all Alzheimer patients examined, show the typical AD pattern of deficits which are located primarily in the part of the brain called the parietal lobe. A second group has deficits in the paralimbic cortical region. A third group is disproportionately affected in the left hemisphere of the brain, and a fourth has deficits in the brain's frontal lobes in addition to the more typical parietal lobe deficits.

Results from LNS research suggest that patterns of metabolic and neuropsychological deficits (impaired thought processes) persist well into the later stages of AD. The ability to foresee the probable course of AD in individuals can help patients and their families with care planning. It may also help in gauging the effectiveness of various treatments, since deviations from the expected progression of the disease that result from the administration of particular treatments can be more accurately measured.

Down Syndrome May Serve as a Model for Alzheimer's Disease

NIA scientist Dr. Mark Schapiro has found that similarities between older patients with Down syndrome and those with AD may offer insights into common mechanisms and treatments for these diseases.

Down syndrome is a genetic disorder evident at birth that results from the inheritance of an extra portion of chromosome 21. As they reach age 35, Down syndrome patients invariably begin to develop the same neuropathology (brain plaques and tangles) seen in Alzheimer patients, and at least one-third of them go on to develop dementia. This link between Down syndrome and Alzheimer-like brain pathology prompted the investigations that ultimately identified chromosome 21 as the location of the gene responsible for the production of amyloid. PET scans show that, like Alzheimer patients, demented patients with Down syndrome show decreased brain metabolism in areas concerned with thought processes.

Besides accelerating the progress of drug studies, viewing Down syndrome as a model for AD may also help researchers in determining the relative importance of environmental versus genetic factors in the development of the disease. LNS studies comparing patients with familial AD and patients with the sporadic form have uncovered no differences between the two based on PET tests and analyses of autopsied tissue.

NIA Establishes Field Office To Study Dementia in Japanese

Through its Epidemiology, Demography, and Biometry Program (EDB), NIA has established an Asia-Pacific Office in Honolulu, HA, to study dementia and aging. Dr. Lon White, former chief of EDB's epidemiology office, has been appointed chief of this unit. This office will oversee a project called the Honolulu Asia Aging Study (HAAS), which is being conducted in cooperation with the National Heart, Lung, and Blood Institute. Approximately 5,000 men of Japanese ancestry have agreed to participate in the study, which will provide a rare opportunity to determine the rates and risk factors for AD and multi-infarct dementia in this population. (Japan is the only industrialized country which consistently reports higher rates of vascular dementia than AD.) Wives of a subgroup of the participants will be examined as part of a special followup. The HAAS will be coordinated with parallel studies being developed at sites in Japan (Hiroshima, Tokyo, and Osaka), Taiwan, and Seattle.

Cognitive Impairment Linked to Early Death

One suspected risk factor for dementia is having a low educational level, which may or may not be linked with early death of Alzheimer patients. It has been known for some time that cognitive impairment is associated with increased mortality, but a recent report challenges the notion that low educational level predisposes dementia patients to premature death.

Dr. Ingrid Y. Liu, former NIA epidemiologist, and colleagues have analyzed data on cognitive function in participants of the Framingham Heart Study. The Framingham Heart Study, begun in 1948, tracks the development of heart disease in persons as they age. In the period between 1976-78, over 2,000 men and women between age 55 and 89 who were enrolled in the Framingham study were given a battery of mental status tests. The investigators noted that, in the intervening 8 to 10 years, mortality rates corresponded to level of cognitive ability, with those scoring poorest least likely to have survived. The results not only confirm reports that cognitive impairment predicts mortality, but also call into question earlier explanations that education, age, or illness are responsible.

Longitudinal studies are needed to explain the association between poor cognitive function and increased risk of death. However, the investigators speculate that if cognitive impairment itself causes early death, interventions to improve cognitive function might one day reduce this risk and thereby lead to greater life expectancy for patients with dementia. This research was supported in part by the National Institute of Neurological Disorders and Stroke.

Researchers Profile Caregivers' Needs and Strategies

A great deal has been learned over the past decade about the families who care for Alzheimer patients. We now know that spouses provide most of the care, that most caregivers are women, and that families often provide care for many years, in spite of tremendous financial and personal cost. Investigators are now asking why some caregivers cope more effectively than others, what makes some caregivers persist in their caregiving role while others drop out, and how we can assist those who want to continue providing care.

Gender and Personality Influence Coping Among Caregivers

A study supported by the Western Psychiatric Institute and Clinic in Pittsburgh finds considerable difference in the way people cope with and react to the ongoing stress of caring for Alzheimer patients. Drs. Richard Schulz and Gail Williamson report that over a 2-year period, female caregivers were found to be consistently more depressed than men. The instrument used to measure depressive symptoms identified those caregivers likely to develop clinical depression. Those most severely affected are women who (1) have financial concerns, (2) care for patients that frequently exhibit problem behaviors, and (3) receive little assistance from others. While one would naturally expect caregivers in such situations to be more depressed (regardless of gender), Schulz and Williamson found that even when the caregiving situation is controlled for, women continue to be more depressed.

Two factors are associated with and may protect against depression in caregivers. Men and women who have what the investigators call a communal orientation—those who believe strongly that people should help each other—fare better at avoiding depression. This finding was true for all caregivers, regardless of the amount of care they actually provided. Those who report having had a close relationship with the patient prior to his/her illness also felt less burdened.

Among the many stressful situations encountered, two are cited by a majority of caregivers as being most difficult—coping with the patients' memory loss, and the general decline of the loved one. Strategies found to be most helpful in confronting the patient's memory loss include doing something that is relaxing for the caregiver and accepting the reality of the patient's deficit. Seeking social support appears to help caregivers cope with the patient's decline. Those caregivers who wish the problem would go away, keep their feelings to themselves, or try to see the situation in a different light are more prone to depression. The investigators caution that while women tend to use less-effective coping strategies, it is unclear whether these coping strategies result in depression or are a response to it.

Expanding Community-Based Long Term Care Services

Studies conducted by Dr. Charles Given and associates at Michigan State University provide direction for refining policies regarding long-term home care. Findings and recommendations are based on observations of more than 500 caregivers who have provided care for several years to both physically and/or cognitively impaired patients. Specifically, caregivers were asked which tasks required the most assistance to manage activities of daily living (ADL's). Given found that dependencies in

some tasks require much more assistance than others. For instance, helping someone with mobility problems move from a bed to chair is much more demanding than helping the patient eat or get dressed and is more likely to require assistance beyond that which the primary caregiver alone can provide. Because simple counts of numbers of dependencies in ADL's do not take these differences into account, the provision of assistance to families should be based on the type, rather than number, of dependencies.

The Michigan investigators also found that AD families use fewer community services than those caring for patients with other conditions. Reasons cited include affordability, lack of knowledge about services or how to access them, and insensitivity of service providers to the patients' need. The researchers recommend that health providers and other professionals assume more responsibility for linking families with community-based care and for explaining when and how to use such services. Because dementia patients require more supervision and special care, the investigators also suggest that agencies design their programs and train employees to respond to the multidimensional needs of these patients and their families.

Educational Activities Benefit Professional and Family Caregivers

The ADRCs are actively involved in professional training and outreach. In addition to fostering clinical and research skills, the Centers work with local Alzheimer's Association chapters to conduct educational activities for the general public.

An important function of each ADRC's education and information transfer core is to translate research-based knowledge into practical information and training tools for physicians and other health care personnel. One notable example is the University of California at San Diego (UCSD), whose education core activities are directed by Dr. Phyllis Lessen. Using a train-the-trainer concept, Lessen's staff have established a mini-residency that trains approximately 40 practicing health professionals each year. Many of the trainees are themselves educators who then further disseminate the newly acquired information. Four multidisciplinary geriatric care programs have been initiated in nearby clinical settings as a result of the mini-residency training. Local medical faculty will rotate through the mini-residency program, including faculty from all three health professional programs at San Diego State University.

To ensure adequate manpower in the field of AD, core staff provide research and clinical training experiences to faculty of UCSD, clinical fellows, internal medicine students, neurology residents, and medical students. Staff have also been instrumental in introducing a new course in clinical geriatrics with a focus on dementing disorders into the UCSD medical school curriculum, enhancing medical students' knowledge of the special considerations surrounding the diagnosis and care of dementia patients.

To reach community health professionals, staff convene several large meetings each year addressing the practical issues of caring for patients with dementia. An audiovisual training tape on managing behavioral symptoms and a workbook for use in teaching allied health professionals in nursing homes have been developed. Teaching materials to help nurses assess the effects of medication on people with AD have also been completed. These materials may help reduce the problem of delirium in nursing home residents. Staff have also developed a brochure on safety in the home and automobile for use by family and professional caregivers.

Development of training materials for caregivers at the Washington University ADRC in St. Louis, MO, and the ADRC at The Johns Hopkins University in Baltimore, MD, are further discussed in the NCNR section of this report.

2. Research Advances in Alzheimer's Disease Supported and Conducted by Other NIA Institutes

NATIONAL INSTITUTE OF NEUROLOGICAL DISORDERS AND STROKE

The National Institute of Neurological Disorders and Stroke (NINDS), as the principal source of support for neurological research in the United States, is a major participant in the study of AD. NINDS-supported scientists are pursuing a wide variety of research leads to expand knowledge of this complex disease. Basic studies seek to determine its underlying causes and effects while clinical research sharpens physicians' skills at diagnosing and treating patients.

Defining Who is At Risk

NINDS grantees Drs. Miriam K. Aronson and William H. Frishman at the Albert Einstein College of Medicine of Yeshiva University in the Bronx, NY, have recently linked AD in older women with heart attacks.

Between October 1980 and May 1983, the investigators enrolled healthy men and women aged 75-85 in a study exploring risk factors associated with the development of dementia. The participants were given annual evaluations to determine changes in their health and mental status. This year, the scientists revealed that female study members who had experienced a heart attack were five times more likely to develop AD than other women in the study; heart attacks among male participants did not appear to be similarly associated with an increased risk of the disease. Other factors studied by the scientists—age, head injury, thyroid disease, educational level, and family history of dementia—did not appear to indicate increased risk. Further study will show what impact on the prevalence of AD results if women reduce their risk for heart attacks by changing their diets, smoking habits, and other cardiac risk behaviors.

NINDS intramural scientists Drs. Vijay Chandra, the late Bruce S. Schoenberg, and their colleagues studied the relationship between head trauma with loss of consciousness and the development of AD. Their results, published this year, found no significant link between the two.

The Search Continues For More Specific Diagnostic Tests and Better Treatments

As yet, there is no specific diagnostic test for AD. NINDS grantee Dr. Kenneth M.A. Welch at Henry Ford Hospital in Detroit, MI, and colleagues recently used magnetic resonance imaging (MRI) scans to measure compounds involved in the brain's use of energy in 10 patients with a form of multi-infarct dementia (MID) in the subcortical area of the brain, 17 AD patients, and 17 healthy individuals. MID, caused by multiple small strokes, is the second most common cause of cognitive impairment in older people. Since it may be possible to prevent further decline in MID patients by altering their risk factors for stroke (described in a separate report), it is important that physicians distinguish between the two disorders. By injecting patients with a phosphorus solution prior to scanning them, the scientists were able to distinguish disease-related differences that enabled them to accurately classify 100 percent of subcortical MID patients and 92 percent of AD patients.

Although the cause of AD remains unknown, many scientists suspect symptoms may arise from a loss of cells which produce the neurotransmitter acetylcholine, a brain chemical crucial to memory formation. Levels of this important chemical may be decreased by 90 percent in people with AD.

In the search for better methods of diagnosis, NINDS intramural scientist Dr. Thomas N. Chase and colleagues are studying the utility of single-photon emission computed tomography (SPECT) scans for measuring the density of receptors for acetylcholine. Receptors are proteins on the cell surface that recognize, and allow the cell to use, substances outside the cell. By injecting six AD patients, three Pick's disease (a disorder clinically similar to AD) patients, and seven healthy volunteers with an iodine-labeled compound, the investigators were able to locate the brain areas with the greatest abnormalities in these receptors. When compared with the healthy individuals, five of the six Alzheimer patients showed reduced receptor numbers in one brain region while the Pick's patients showed reductions in a different part of the brain. This indicates that SPECT may be useful in differentiating AD from Pick's disease.

At Beth Israel Hospital in Boston, MA, NINDS grantee Dr. Marek-Marsel Mesulam is studying physostigmine and tacrine (THA), two drugs that enhance transmission of acetylcholine by inhibiting its fast breakdown by enzymes known as cholinesterases. In studies of Alzheimer patients' brains, Mesulam found large amounts of two cholinesterases in the plaques and tangles, but relatively little in the remaining normal brain cells. He found that inhibition of these enzymes' activity by both drugs was greater in the normal brain cells than in the plaques and tangles. Since most cholinesterases in Alzheimer patients are found in the plaques and tangles, there may be an opportunity for designing new drugs geared more toward weakening the activity of plaque and tangle-bound enzymes than toward enhancing the transmission of acetylcholine. Mesulam also found that certain properties of the enzymes found in plaques and tangles were different from those of enzymes in normal cells—a discovery that may be useful in diagnosis of AD through brain biopsy or cerebrospinal fluid examination.

Genetic Clues Indicate Alzheimer's Disease May Have Several Causes

Recent studies by NINDS grantees and intramural scientists suggest that the condition we call AD may actually be a group of diseases with similar symptoms. NINDS intramural investigators Dr. Ronald Polinsky and Linda Nee, working with 64 other members of the Familial Alzheimer's Disease (FAD) Collaborative Study group, this year reported that not all FAD can be linked to chromosome 21, as had been suggested in earlier studies. A study of 48 FAD families indicated that age at

disease onset seemed to be a key discriminant: families with a history of early onset (before age 65) had significant linkage to chromosome 21, while those with late onset displayed minimal evidence for such linkage. The scientists believe this strengthens the theory that AD may have more than one cause. Possible alternative causes include a gene or genes on other chromosomes, an environmental factor or factors, or combination of both.

In another study of 70 FAD families, Dr. Polinsky, Ms. Nee, and their colleagues found that children of Alzheimer patients had different likelihoods for developing the disease based on their parents' age at onset. People whose parents developed the disease before age 58 had a 53 percent lifetime risk for getting the disease; those whose parents became ill after age 58 had an estimated 86 percent risk rate. Furthermore, men and women were equally likely to develop the disease in early onset groups, while female offspring had a slightly greater risk than males in late onset families. These data suggest that early onset AD may be primarily genetic. However, the 86 percent risk rate in late onset families indicates that something more than genetics is involved in those groups, perhaps an environmental factor.

NINDS-supported scientists continue to investigate many different avenues of research in their quest for the cause of AD, and better methods of treatment and diagnosis for this disease.

NATIONAL INSTITUTE OF ALLERGY AND INFECTIOUS DISEASES

Currently there is little evidence that AD is caused by a virus or other infectious agent. Some of the symptoms and the brain damage seen in Alzheimer patients, however, are strikingly similar to that of other viral diseases such as AIDS and scrapie. These similarities suggest that studies of viral diseases of the brain might also shed light on the AD process.

The research at the National Institute of Allergy and Infectious Diseases (NIAID) that is relevant to AD focuses on viral diseases in the brain. At NIAID's Rocky Mountain Laboratories (RML) in Hamilton, MT, intramural scientists Drs. Bruce Chesebro, Richard E. Race, and their colleagues have been studying scrapie, which is thought to be a viral disease, although the virus that causes it has not yet been identified. Animals with scrapie develop brain plaques formed from thread-like protein strands. These plaques resemble the protein-laden plaques seen in the brains of AD patients. The major protein that composes the scrapie plaques is a compound called prion protein (PrP).

Researchers have discovered that PrP is produced by normal as well as scrapie-infected brains, but for some unknown reason, in normal brains the protein doesn't clump into plaques. The same is true for the amyloid compound that comprises the brain plaques found in Alzheimer patients. (Amyloid is found in normal and Alzheimer's-diseased brains, but the protein only congregates into plaques in the diseased brains.) The RML investigators have been trying to uncover what changes scrapie infection fosters that cause PrP to form plaques. Similar changes may induce the amyloid plaques seen in Alzheimer patients.

Last year, Race and Chesebro developed a laboratory system that enabled them to grow the scrapie agent in tissue culture. This was an important step because it has not been possible to purify the modified PrP from brain tissue. In their first studies they were unable to detect any changes in the normal production of PrP generated by cultured mouse brain cells after the cells were infected with scrapie. But recently a more sensitive technique allowed them to pinpoint the type of PrP in the infected cells that differs from normal cells. This altered PrP was found to be resistant to enzymes and other substances that break down the normal form of the protein. The experiments suggest that PrP may be modified after it is synthesized.

Future studies using this new system are aimed at uncovering what triggers the production of resistant PrP and what structural features contribute to its resistance to normal chemical breakdown. Answers to these questions will help explain how plaques form in the brains of scrapie-infected animals. That information, in turn, might shed light on the plaque-forming processes in Alzheimer patients.

NATIONAL CENTER FOR RESEARCH RESOURCES

Shared research facilities provided by the National Center for Research Resources (NCRR) support a variety of studies focused on AD. Recently, grantees of the General Clinical Research Centers (GCRC) program found that nighttime brain activity may help identify patients at risk of developing AD. Others using a GCRC have had some success in the use of experimental treatments to improve the mental function of patients with the disease.

Nightly Activity May Signal Risk of Alzheimer's Disease

Measurement of brain activity during sleep may be useful for early detection of AD and other forms of dementia, according to NCRR grantee Dr. Patricia N. Prinz. In studies conducted at the University of Washington GCRC in Seattle, Prinz and her associates found a characteristic electron cephalographic (EEG) pattern during sleep in patients with early stage disease.

The research has revealed a pattern of increased slow-wave activity and decreased fast-wave activity during the rapid eye movement (REM) stage of sleep in patients at risk for AD. As part of a 10-year study of 500 patients, the grantees found that the EEG changes during REM sleep tend to occur in patients who develop memory loss. Patients in the study were considered at risk for AD because of mild memory loss, a family history of AD, or other risk factors such as head injury.

After monitoring many factors, including levels of growth hormones, Prinz and colleagues concluded that the EEG changes during REM sleep are the best biological predictor of whether a patient is likely to lose cognitive function. The nighttime EEG pattern is not exclusive to AD, however. This pattern may be seen in other forms of dementia that involve loss of nerve cells in the brain's cortex.

The findings could provide a convenient way to detect AD, or other forms of dementia caused by neuronal loss, before the disorder has advanced significantly. Measurement of EEG may even point to a risk of AD in patients who have not yet developed symptoms of dementia. The findings could also lead to development of a diagnostic system that could be used by clinical sleep diagnostic centers. Prinz hopes the technique can be made widely available as a commercial product because most patients who seek medical advice to explain apparent memory problems do not have AD. The nighttime EEG test, therefore, could reassure many patients that they are healthy.

Medication Can Help Some Patients With Alzheimer's Disease

An experimental drug called physostigmine can improve mental function of some patients with AD, according to NCRR grantee Dr. Lindy E. Harrell and her associates at the University of Alabama GCRC at Birmingham. The GCRC research has shown that physostigmine treatment may be useful for about 40 percent of patients with the disease.

Physostigmine stimulates brain pathways that use the neurotransmitter acetylcholine. Lack of adequate amounts of acetylcholine has long been associated with deficits in learning and memory and is thought to play a central role in AD. By using physostigmine to boost brain levels of the neurotransmitter, Harrell and colleagues hope to alleviate some of the symptoms of the disease.

The grantees have evaluated the first 20 patients with mild-to-moderate AD who received physostigmine in a double-blind trial (where neither the physician nor the patient knows which treatment the patient is receiving). Compared to those taking placebos, eight patients taking the drug showed improvement on both an objective learning test and in subjective ratings by family or medical staff. Some of the patients who responded to physostigmine had only mild improvement in cognitive function. Others, however, showed a dramatic change. Harrell reports family members of patients responding to physostigmine often were able to tell whether the patient was receiving physostigmine or a placebo.

Combined Drug Therapy May Benefit Some Patients

Using two drugs to stimulate separate pathways in the brain holds promise for treating some patients with AD, according to Dr. Kenneth L. Davis and associates at the Mt. Sinai School of Medicine in New York City. In preliminary studies conducted at the Mt. Sinai GCRC, the grantees found that some patients who do not respond to the experimental drug physostigmine may show cognitive improvement when another drug, such as clonidine or yohimbine, is added.

The idea of using combined drug therapy is based on the hypothesis that some AD patients may be affected by damage not only to the cholinergic brain pathways, which use the acetylcholine, but also from damage to noradrenergic pathways. This additional, noradrenergic damage might be present in one-third to two-thirds of patients with AD. In pilot studies, Davis and associates have treated patients with AD by administering physostigmine with clonidine or yohimbine, both of which stimulate noradrenergic neurons. In some patients, the combined therapy produced cognitive responses that did not occur with physostigmine treatment alone.

The grantees now are conducting clinical studies with larger numbers of patients in an effort to confirm the preliminary findings. They also plan to test other drug combinations that act on both the cholinergic and the noradrenergic pathways. The findings could lead to better ways to alleviate the symptoms of AD.

NATIONAL CENTER FOR NURSING RESEARCH

The National Center for Nursing Research (NCNR) research on AD focuses on nursing techniques to improve home and institutional care of AD patients. Studies are also aimed at developing better ways to educate and assist family caregivers.

Mental Stimulation Techniques Studied

Teaching family caregivers techniques to help improve the functioning of the patient with AD also may help to reduce caretaker stress and enhance their ability to handle the patient. NCNR grantee Dr. Mary P. Quayhagen, at the University of San Diego, in California, will be testing mental stimulation techniques for patients that family caregivers can practice at home. Quayhagen and colleagues will be looking for functional improvement in the patients, as well as enhanced well-being in the caregivers.

One hundred twenty-six families with a member who has mild-to-moderate AD will be studied. Families will be divided into three groups. In an active mental stimulation group, family caregivers and patients will receive 1½ hours of training and supervised practice a week in conversation, memory techniques, and problem solving. Caregivers will work with patients at home for 5 additional hours each week.

In a passive mental stimulation group, caregivers will spend the same amount of time with patients, but practice such techniques as reading to the patient, which do not require active mental participation by the patient. A third group will not receive any training on stimulation techniques. Participants in all groups will be evaluated during and after the 3-month training program for functional improvement in the patients and enhanced well-being in the caregivers.

Providing the family caregiver with a daily plan to provide mental stimulation for the AD patient may help to enhance skills needed for competent functioning and improve the quality of life for both the patient and the family caregiver.

Teaching Cognitive Assessment to Home Health Care Professionals

Most patients cared for by home care professionals are over age 65 and many have unidentified AD and related dementias. Some suffer from disorders resulting in dementia which is reversible. Nurses and other professionals who provide home care should be able to identify and provide a preliminary evaluation for cognitively impaired patients, and refer them for further comprehensive evaluation. The home caregiver can then tailor treatment plans based on these evaluations and provide advice to family caregivers.

NCNR grantee Dr. Leonard Berg and colleagues at the Washington University School of Medicine in St. Louis, MO, are developing an educational package to help nurses, social workers, and others who provide home care identify the need for evaluation and conduct cognitive assessments in a skillful and consistent manner. A videotape and written materials will include techniques to assess a patient's memory, orientation, communication, functional abilities, attention, and judgment. The package also will cover strategies to help older persons overcome or compensate for problems in these areas.

As the increasing age of the population results in greater use of home care services, expertise in identifying problems related to dementia will help nurses as well as other professionals providing home care better serve patients and their families. The success of home health care relies heavily upon the skills and independent judgments of these clinicians.

Videotape Helps Nurses Assess Psychiatric Symptoms in AD Patients

AD patients make up the majority of long-term residents in nursing homes. In addition to severe cognitive and functional impairments, many have psychiatric symptoms such as hallucinations, delusions, depression, and agitated or combative behavior. Many nurses do not have training to assess and care for patients with psychiatric symptoms.

NCNR grantee Dr. Donald L. Price and colleagues at The Johns Hopkins University School of Medicine in Baltimore, MD, are developing a videotape and manual to train nurses in long-term care facilities to assess and monitor the mental status of AD patients. A skilled assessment of psychiatric symptoms can enable nurses to plan care that will help moderate patients' disabilities, enhance their strength, and provide maximum freedom.

The videotape will teach nurses to detect changes in mental status that often are the first signs of a medical illness, to document symptoms that may be the effects of mind-altering drugs, and to detect unwanted side effects. It will help nurses understand the symptoms of depression—which is treatable in AD patients, or delirium—which can be life-threatening to the patient and dangerous to staff.

The videotape will provide useful information to care providers such as social workers and physicians as well as to nurses.

3. Outlook

Research on AD has so far not yielded a definitive etiology. Nevertheless, substantial progress has been made toward addressing some of the major unresolved questions which have strong bearing on potential causative mechanisms. The origins of the hallmark neuropathological features of AD, amyloid plaques and neurofibrillary tangles, are becoming increasingly clear. A major protein component of tangles has been shown to be a modified form of a protein involved in maintaining the shape of neuronal processes. Amyloid deposition has been shown to result from improper proteolytic processing of a normally occurring protein on the cell surface. Recent studies have also suggested ways in which the amyloid protein could be responsible for neuronal cell death, as well as ways in which this process could be therapeutically interrupted. Despite the absence of a clinical breakthrough, the goals of understanding the etiology of the disease and discovering means of treatment or prevention of AD are more clearly in sight.

B. UNDERSTANDING AGING

Poor health is not an inevitable consequence of old age. Scientists at Institute's Gerontology Research Center (GRC) involved in NIA's Baltimore Longitudinal Study of Aging (BLSA) have recently begun to distinguish between non-pathological age changes and those associated with disease. Repeated observations of risk factors show that some changes, such as body mass index, are relatively stable over time. Other changes, such as white blood count and diastolic blood pressure, are more variable. Chronically elevated levels of these factors are associated with reduced survival. Further, the relative importance of many risk factors, such as cholesterol and white blood count, are not the same over the adult life span, providing evidence that clinical intervention must be age-specific.

Dietary Restriction Retards Changes in Intestinal Cells

Scientists have found that animals fed as much food as they want are not as healthy and do not live as long as those whose diet is restricted in calories but formulated carefully to guard against malnutrition. To date, dietary restriction is the only intervention that has been shown consistently to extend life span, and studies are under way to learn how it works.

NIA grantees Dr. Peter Holt of St. Luke's/Roosevelt Hospital Center and Columbia University in New York City, Dr. Arlan Richardson at the Audie L. Murphy VA Hospital GRECC and the University of Texas Health Science Center in San Antonio, and colleagues compared the cellular changes in the small intestines of rats on a restricted diet with changes seen in animals whose diet was not restricted. The investigators found a pronounced delay in the development of age-associated changes in intestinal cells in rats fed a food-restricted, life-prolonging diet.

Male Fischer 344 rats were randomly divided into two groups. The control group was fed an unrestricted diet. The other group was fed a restricted diet that reduced calories while ensuring proper nutrition. The rats were studied at selected monthly intervals.

The investigators examined the lining of the small intestines, which contains many tiny finger-like projections called villus cells, through which nutrients are absorbed. They also studied the pits—or crypt cells—at the base of the villi. The villus cells secrete intestinal juice which is needed for digestion. Holt and Richardson found that the number of villus cells changed with age and dietary regimen. There was a significant increase in villus cells in control animals; this increase was not found in rats fed a restricted diet. In these animals, villus cells were significantly increased only in the oldest rats.

Researchers also found that there were 61 percent more crypt cells in the control rats at 21 months of age than at 12 months and 83 percent more crypt cells at 27 months of age. In rats with restricted diets, the number of crypt cells did not increase until after 27 months of age. These data indicate that the increase in crypt cells—characteristic of the aging small and large intestines—was inhibited by restriction of food intake.

Dietary restriction prevented an increase in both villus and crypt cell numbers to the age of 27 months and beyond. This regimen also retarded similar proliferative changes in the colon. Scientists believe that an abnormal increase in the number of cells is also an important step in the development of cancer. The investigators

showed that dietary restriction significantly retarded these intestinal changes and increased the life span of the animals.

Anti-Growth Gene Isolated

As they age, cells from animals and humans show a reduced capacity to proliferate. Intramural scientist Dr. David B. Danner and colleagues at the GRC, have recently isolated a gene that codes for a protein which has been termed prohibitin. Prohibitin appears to have a negative effect on cell growth.

Danner injected prohibitin messenger RNA into actively growing cells. He found that the cells stopped growing but remained viable. This suggests that prohibitin, which may play a role in regulating normal cell growth, has an inhibitory effect on cell proliferation. Changes in the expression of prohibitin gene also may play an important role in cellular senescence.

Danner believes that the discovery of a new antiproliferative gene may also be important to understanding the uncontrolled growth of cancer cells. When grown in culture, many types of cancer cells are immortal; that is, they escape normal cellular aging and continue to divide indefinitely. Changes in the expression of the prohibitin gene may be a key to why these cancer cells are able to continue their uninterrupted growth.

The scientists are now looking at the regulation of prohibitin gene expression in normal, cancer, and aging cells. If overexpression of prohibitin is involved in age-related loss of cell growth, then perhaps finding a way to lessen the expression of this gene will be important in minimizing age-related pathology.

Scientists Wake Up to Sleep Disorders in Older People

More than half the 29 million Americans over age 65 may experience disruptions of sleep, according to studies supported by NIA. These sleep disturbances may be caused by many factors including ill health, retirement and other changes in social patterns, death of a spouse or close friend, increased use of medications, or changes in circadian rhythms.

To assess current knowledge about sleep disorders in the aging population, NIA and NIH's Office of Medical Applications of Research sponsored a Consensus Development Conference on sleep disorders in older people. Participants called for research to develop diagnostic procedures and effective therapies for sleep apnea and insomnia—common sleep disorders among older persons. Research was called for to establish the safety and efficacy of the over-the-counter sedatives and hypnotic agents often used by older people, as well as the extent to which these drugs contribute to or alleviate problems of sleep.

The National Commission on Sleep Disorders Research held its first public hearing in September 1990. Dr. William C. Dement at Stanford University's School of Medicine in California, is the Commission Chair; Dr. Andrew Monjan at NIA is the Executive Secretary. The Commission, established by the Department of Health and Human Services, will assess the extent to which sleep disorders exist and the social and economic consequences of sleep deprivation. It will develop a national long-range plan to identify research and staffing needs relating to sleep disorders.

CHANGES IN AGING CELLS

Within each cell, a delicate balance exists between genes that "turn on" cell reproduction (called proliferative genes) and those that "turn off" reproduction (referred to as anti-proliferative genes). Disruption of this balance can lead to an inability to reproduce (proliferate)—which occurs in aging cells—or in uncontrolled proliferation—seen in cancer cells.

Scientists supported by the NIA are studying genes that block cell proliferation in aging, or senescent, cells. The identification of genes that play a role in senescence by controlling the life span of cells, factors involved in regulating gene activity, and the cellular interactions of the gene products will be of enormous value in understanding aging processes and age-related diseases. Information obtained at the molecular level also may lead to the development of interventions that slow or reverse aspects of human aging.

A Gene Required for Normal Cell Division Is "Turned Off" in Senescent Cells

NIA grantee Dr. Judith Campisi and her colleagues at the Boston University Medical School in Massachusetts studied the molecular basis of cellular aging. They compared the patterns of gene expression (the switching on of genes) in senescent cells with those in young adult cells.

In culture, normal human fibroblasts (connective tissue cells) have a finite life span. Typically, these cells double in number 20 to 60 times before their ability to

proliferate stops. Losing the ability to proliferate is an important characteristic of cellular senescence.

When young adult fibroblasts are deprived of growth factors, their ability to proliferate is stopped. These cells are called quiescent cells. When appropriate growth factors are resupplied to young quiescent cells, they are stimulated to divide once again. In contrast, senescent cells cannot be stimulated to proliferate by adding any combination of growth factors.

Campisi demonstrated that gene expression is indeed altered in senescent fibroblasts. For example, the expression of the *c-fos* gene, a proliferative gene required for normal cell division, is repressed, or "turned off," in senescent cells. The loss of growth factor-stimulated expression of this gene may be one of the underlying causes for the inability of senescent cells to proliferate.

The Retinoblastoma Gene Also May Play a Role in Cellular Senescence

NIA grantee Dr. Gretchen Stein and her colleagues at the University of Colorado at Boulder also are studying the expression of genes that inhibit normal cell proliferation to determine their role in cellular senescence. Stein's research involves the retinoblastoma (RB) gene, a critical antiproliferative gene which is associated with eye tumors and several other types of cancer. The RB protein blocks the initiation of DNA synthesis, which is required for cell division.

Stein and her collaborators have shown that both senescent and quiescent cells contain the inhibitory form of the RB protein. Following the addition of growth factors, quiescent fibroblasts inactivate the RB protein, which allows them to synthesize DNA and ultimately divide. In contrast, senescent cells do not inactivate the RB protein after the addition of growth factors. As a result, these cells fail to synthesize DNA, which is needed for cell division. Stein's findings suggest that this failure to inactivate the RB protein is involved in cellular senescence.

The research of Drs. Stein and Campisi points to two critical regulatory events in cell proliferation that are altered in senescent cells. Failure to inactivate the RB protein (seen by Stein) could be related to the loss of *C-fos* expression in response to growth factor stimulation (seen by Campisi). Identification and characterization of the interactions between proliferative and antiproliferative genes such as these in actively dividing and senescent cells promises to provide additional insights into the molecular basis of cellular senescence.

DIABETES AND AGING

Diabetes mellitus, especially non-insulin-dependent diabetes is a frequently occurring disorder associated with old age. The NIA conducts and supports research on the physiological mechanisms involved in diabetes. Results were recently published on the effects of body composition and exercise on risk of diabetes.

Study Shows Benefits of Upper Body Weight Loss

Older people often become less physically active and gain weight, particularly in the trunk of the body. Women as they age may become "pear shaped" with increased fat accumulated in hips and thighs. Men tend to become "apple shaped" with thicker waistlines.

This increase in body fat can impact more than appearance. For example, obese older people are particularly at risk for diabetes and develop heart disease at an accelerated rate. Because weight gain has been shown to increase the risk of these diseases in young and middle aged individuals, NIA grantee Dr. Patricia Coon and coworkers at The Johns Hopkins University School of Medicine in Baltimore, MD, studied 20 healthy older obese men. The relationships of age, body composition, and exercise capacity to glucose tolerance, insulin, triglycerides, and cholesterol were measured. A deterioration in glucose tolerance and increased insulin sensitivity are associated with increased risk for both diabetes and heart disease.

Coon selected a group of volunteers of comparable age, percent body fat, and waist-to-hip ratio (WHR) measurements and then randomly assigned them to either weight loss or aerobic exercise training programs. Participants in the weight loss program were taught behavioral techniques to reduce caloric intake and were given guidelines for good nutrition. Food records were analyzed and low calorie diets were suggested to promote weight loss. Those in the exercise program rode stationary bicycles, walked, and jogged three times each week but were given weight-maintaining diets. Training programs were based on each individual's aerobic capacity and were supervised by an exercise physiologist.

After 6 months, Coon and her colleagues began assessing the effects of the two programs. She found that in the weight loss group a 12 percent loss in body weight was associated with significant improvements in triglycerides, cholesterol, insulin

levels, and glucose tolerance. While the findings indicate that obesity is an important determinant of metabolic functions, an upper body distribution of fat was associated with glucose intolerance and insulin resistance. Those men in the weight loss group reduced waist measurements 1½ inches for each inch lost in the hips. Aerobic exercise increased oxygen capacity but did not change WHR or percent body fat and therefore did not change the risk of diabetes.

Coon's study indicates that body composition or percent body fat is a more important determinant of metabolic function than either age or aerobic capacity. Although weight reduction appears to have a greater impact on reducing risks for diabetes, a combination of weight loss and exercise is considered the best nonpharmacological method of improving glucose tolerance and insulin levels and reducing these risks for diabetes.

CANCER AND AGING

Cancer is one of the most serious and pervasive diseases affecting people 65 years and older. Approximately 55 percent of all cancers—and 66 percent of all cancer deaths—occur in this age group. Dr. Rosemary Yancik, NIA's Assistant Director for Liaison and Applied Research on Aging is organizing initiatives that focus on the aging/cancer interface. She is working cooperatively with NIA's Biology of Aging Program and the National Cancer Institute. Research interests involve delineation of problems unique to older individuals with cancer and further development of the knowledge base for cancer prevention and control. The Institute is particularly interested in research that furthers an understanding of the relationship between aging and cancer, especially for those tumors that most heavily afflict older individuals (e.g., cancers of the prostate, breast, colon, rectum, ovary, and bladder). NIA also encourages fundamental research on control mechanisms for cellular growth, differentiation, and senescence; differences in tumor behavior with advancing age; molecular genetics and the genetic epidemiology of cancer; and pharmacokinetic monitoring to determine the effects of aging on the absorption of drugs. In addition, epidemiologic research using a variety of databases is being planned to help identify research and health service needs.

The NIA and the National Cancer Institute (NCI) have coordinated their mutual research interests. Joint activities include a June 1990 workshop on the underlying molecular, cellular, and immunological factors in age-related cancers and the release of a program announcement to stimulate investigator-initiated research in these areas. In November 1990, NIA, NCI, and the Association of American Cancer Institutes (AACI) cosponsored a meeting to discuss ways to explore the role of cancer centers in further integrating aging and cancer research. AACI centers could play a prominent role in developing data on the older adult with cancer. Areas under consideration for collaboration include studies of the effects of chemotherapy on older people for specific tumors; the pharmacology of anti-tumor drugs in older people; influence of co-morbidity and impairment; and health behavior intervention strategies.

ARTHRITIS AND AGING

An age-related disease of unknown cause or causes, osteoarthritis (OA) is characterized by slowly developing local joint pain, stiffness, limitation of motion, and possible deformity. It is the most common form of arthritis and affects most adults over age 60.

The Effects of Obesity on Osteoarthritis

NIA grantee Dr. Maradee A. Davis¹ and colleagues at the University of California in San Francisco have found that while obesity is associated with osteoarthritis in the knees, feet, and hands, the specific distribution of fat on the body does not appear associated with the disease.

Previous studies on the development of gallbladder disease, diabetes, and heart disease all have shown that the distribution of fat on the body is a strong risk factor for these illnesses. For example, people with excess weight in the middle region of the body are at higher risk for heart disease than people with excess weight in the lower body.

It has also been accepted that because of the mechanical stress placed on the joints, obesity is a risk factor for osteoarthritis. Yet Dr. Davis' group found that some contradictions exist. They found that while obesity was associated with osteo-

¹ Dr. Davis' work was also funded by the National Institute of Arthritis and Musculoskeletal and Skin Diseases and the Northern California Arthritis Foundation.

arthritis in the weightbearing joints of the knees and to some extent the feet, it was not associated with osteoarthritis in the hips. However, they also found a strong association between obesity and osteoarthritis in the hands, which are not weightbearing.

The investigators analyzed data from two national health surveys (conducted by the National Center for Health Statistics) to study the association of obesity with osteoarthritis. The U.S. Health Examination Survey I (HES I) conducted between 1960-62 included 1,636 adults between the ages 35 and 79; and the National Health and Nutrition Examination Survey (NHANES I) conducted between 1971-75 included 3,885 adults between the ages 45 and 74. The specific variables analyzed by the investigators were the distribution of body fat as it relates to osteoarthritis in the knees, feet, and hands.

Dr. Davis and colleagues found that the way fat was distributed on the body did not appear to be a factor in the development of osteoarthritis in the knees, hands, and feet, as in other diseases. As expected, researchers found a significant association between obesity and osteoarthritis in the knees; however, they were surprised to find an even higher association between obesity and osteoarthritis in the hands and feet. The investigators note that each joint or joint group may have its own risk factors. For example, the nonweightbearing hand joints may be adversely affected by metabolic factors. In the knees, mechanical mechanisms may be involved as well. The researchers plan to continue exploring the relationship between body fat distribution and osteoarthritis, and other obesity-related factors that may be causing cartilage and joint damage.

C. STRATEGIES FOR PROMOTING HEALTH AND EFFECTIVE FUNCTIONING

A primary goal of aging research is the effort to find new information that can be applied to increase the independence and quality of life for older people.

Exercise Tests Predict Heart Disease

Early intervention is an effective strategy for improving the outcome of health care and containing its costs. Screening tests can frequently provide doctors with information needed to diagnose medical problems while patients are still relatively free of symptoms (asymptomatic). Coronary artery disease is the leading cause of death in the United States and researchers are investigating ways to predict who is likely to have heart problems.

Intramural scientist Dr. Jerome Fleg and colleagues at NIA's GRC in Baltimore, MD, used thallium scanning, a relatively new and noninvasive technique, in conjunction with the conventional treadmill exercise test, to look for evidence of reduced blood supply to the heart (silent myocardial ischemia or SMI) in asymptomatic volunteers. SMI is usually the result of coronary artery blockage. The researchers studied 407 participants, age 40 to 96 years old, from the BLSA. Only those without clinical evidence of heart disease were included in the study.

Each participant took a maximal treadmill exercise test with standard electrocardiogram (ECG) monitoring. At the peak of his or her effort, doctors injected a trace amount of the radioisotope thallium into the participant's arm. At the end of the treadmill test, multiple pictures of the heart were taken to detect the thallium tracer. Areas with inadequate blood supply during the treadmill test due to coronary artery blockage looked like holes or filling defects in the pictures.

Fleg found that the prevalence of exercise-induced SMI increased from 2 percent in the fifth and sixth decades to 15 percent in the ninth decade. During the follow-up period (every 4 to 6 years) coronary events developed in 7 percent of the volunteers who originally had negative ECG and thallium scans; in 8 percent of those who had a positive result in either test; and in a striking 48 percent of those for whom both tests were positive. This result was independent of conventional risk factors such as age, hypertension, and fitness level.

Judicious use of the thallium scan, in conjunction with the treadmill test, may help in the early recognition of SMI in an at-risk population.

Physically Fit Women and Men Live Longer

Moderate levels of physical fitness—which can be attained by most older adults—are associated with lower risk of death from heart diseases, cancer, and other illnesses, according to a study conducted by NIA grantee Dr. Steven Blair and colleagues at the Institute for Aerobics Research in Dallas, Texas. The results of the study were the same regardless of age, sex, or other risk factors.

The 13,344 men and women participants were asked about their medical history and given a physical exam, which included an ECG, blood tests, blood pressure tests, and an exercise treadmill test. The treadmill test measured level of physical fitness.

None of the volunteers had high blood pressure, diabetes, or suffered a previous heart attack or stroke. In addition, none had ECG abnormalities or abnormal treadmill test results. They were assigned to physical fitness categories based on age, sex, and the results of their treadmill test. During the 8-year follow-up, there were 238 deaths.

The investigators found that individuals who were not fit had a higher risk of dying from cardiovascular disease and cancer than those who were fit. Assignment to a fitness category was based on a comparison of age and sex norms with the participants treadmill performance. Age-adjusted, all-cause death rates declined from 39.5 per 10,000 in the least-fit category of women to 8.5 per 10,000 in the group of women who were the most fit. Corresponding values were 64.0 per 10,000 in the least-fit category of men and 18.6 per 10,000 in the most-fit group of men. Based on these findings, the investigators estimate that if all physically unfit persons became fit, death rates could be reduced by 15 percent in women and 9 percent in men.

In related research, the positive influence of exercise on delaying the onset of heart disease was found by NIA grantee Dr. Joel Posner and colleagues at the Medical College of Pennsylvania in Philadelphia.

Volunteers for this study were recruited from senior centers in the Philadelphia area. Screening included a detailed medical history, physical exam, ECG, lung function tests, blood tests, and treadmill test. Volunteers were excluded if they had any chronic diseases affecting their ability to exercise. Participants were age 60 to 86; 57 percent were women and 43 percent were men.

Participants were randomly assigned to three groups: long-term exercisers, short-term exercisers, and nonexercisers (the control group). Two groups rode a stationary bicycle for different lengths of time. The control group attended weekly lectures.

After 4 months, the long-term group received bicycles to continue exercising at home. The short-term group was encouraged to continue exercising but not given home exercise equipment. The control group was told to carry on with their routine activities.

After 2 years, the investigators found that the control group had a significantly higher number of new heart conditions than either of the other groups. When the two exercise groups were combined, 2.4 percent of the exercisers developed new heart disease compared with 12.9 percent of the control group. Moreover, there was a significant difference in time to onset of newly diagnosed heart disease: the average time was 728 days for the long-term group, 715 days for the short-term group, and 672 days for the control group.

Posner believes that moderate exercise (such as the bicycling done by participants in this study) can improve fitness in healthy older people and that exercise provides some protection against the development of heart disease.

New Research on Preventing Falls and Hip Fractures

Falls are the leading cause of injury-related disability and death among older people in this country. Every year falls result in more than 200,000 hip fractures and account for approximately \$7 billion in health care costs. Falls cause about 9,500 deaths annually among people 65 and older. Even if an injury does not occur, a fall can lead to loss of mobility, confidence, and independence.

Former NIA intramural scientist Dr. Andrea Z. LaCroix and colleagues, have shown that the use of the diuretic thiazide, which is prescribed for hypertension, is associated with a decrease in the incidence of hip fractures in older people.

Using data from the NIA's four-site Established Populations for Epidemiologic Studies of the Elderly (EPESE), LaCroix analyzed data on hip fractures for 9,518 respondents over 4 years. The incidence rates for hip fractures among thiazide users was one-third less than that of nonusers.

Although the number of hip fractures was higher for women than men, the protective effect of thiazide was apparent in both sexes. When other risk factors for hip fractures were considered, thiazide continued to have a protective effect. There was no association between the use of other antihypertensive medications and the risk of hip fractures.

In a related study, NIA grantee Dr. Wayne A. Ray and colleagues at the Vanderbilt University School of Medicine in Nashville, TN, showed that the risk of fall-related hip fractures can be reduced by eliminating or changing the type of tranquilizers prescribed for older people. Ray found that older people who took long-acting tranquilizers (those that remain in the body for 24 hours or longer) had a 70 percent greater risk of hip fracture than people who do not take psychotropic medications. Shorter-acting tranquilizers (those that remain in the body less than 24 hours) were associated with a much lower risk of hip fracture.

Long half-life tranquilizers cause a greater impairment of motor skills in older people than short half-life drugs, yet long half-life medications currently are prescribed in as many as 30 percent of geriatric cases. The effects of an evening dose of a long-acting tranquilizer on someone over 65 are likely to persist into the next day and in some cases can last several days.

The investigators looked at medical records of people 65 and older who had suffered a hip fracture between 1977 and 1985. The age and sex of hip fracture patients in the study matched the general distribution of hip fractures in older people: 73 percent of the fractures occurred in women, and 79 percent of the patients were 75 and older.

People who took long half-life benzodiazepines were more likely to suffer hip fracture than those taking short half-life tranquilizers. Those taking short half-life medications had the same risk of hip fracture as people not taking benzodiazepines. The results were not influenced by complicating factors such as dementia, use of a cane or walker, assisted activities of daily living, nursing home residence, and previous hospitalization.

Social Factors Important for Those Living in Board and Care Homes

Many older people live in nursing homes and other institutions which are expensive and often physically and socially restrictive. For this reason, researchers are studying alternative living arrangements that may better meet the special needs of older adults.

Board and care homes (also called foster care or domiciliary care homes) are one such alternative. Board and care facilities are usually private homes where a small group of unrelated adults live together. The owner of the home is, in most cases, an experienced caregiver. One advantage of board and care homes is that residents can receive help for a specific health problem yet live in a small, family-like atmosphere. In addition, on the average, costs are more affordable than at long-term care institutions. Board and care homes cost about \$450 a month, compared to about \$1,750 for 1 month in a nursing home.

NIA grantee Dr. J. Kevin Eckert and colleagues at the University of Maryland Graduate School in Baltimore, interviewed 285 residents of board and care homes to learn more about how they operate, who lives in them, and the quality of care available. They found that the social aspects of the residents' environment, such as peer relationships, were significantly more important than their physical environment in producing the greatest sense of psychological well-being.

Participants were over age 60; 85 percent were white, 65 percent were women, and 67 percent were widowed. The only source of income for the majority of residents was their monthly Social Security payment. Residents were asked questions designed to gauge to what degree they felt comfortable in their social and physical environment, the quality of their relationships with other residents, personal care received from owners, and cost.

In general, residents felt that once their basic needs were met (i.e., an adequate physical environment, access to health care, and reasonable income), social factors were most important. Eckert cautions that these findings must be viewed from the point-of-view of the population studied. Because of their small income, participants may have lacked information needed to compare different living arrangements.

Research on Aging Needed to Curb Cost of Care

Health care costs could triple in the next 50 years unless ways are found to prevent or delay the most debilitating illnesses affecting older people, according to a study by Dr. Edward L. Schneider at the University of Southern California's Andrus Gerontology Center and NIA intramural scientist Dr. Jack M. Guralnik. Based on alternative U.S. Census Bureau projections for the older population, the researchers analyzed the prevalence of disease and disability at specific ages and selectively estimated the costs of providing health care.

The Federal Government's largest health care expenditure is through Medicare, which pays the majority of health care costs for older Americans. The average Medicare cost per person increases with age, rising from \$2,017 per year for individuals age 65 to 74, to \$3,215 for those age 85 and above. According to Schneider and Guralnik, the cost of Medicare will nearly double by the year 2020. By 2040 the level of Medicare spending for the population age 65 and above could be as high as \$212 billion (in 1987 dollars) compared to \$71 billion in 1987.

Demographers agree that America's older population will increase dramatically during the next century. At the beginning of this century, only 4 percent of the population over age 65 was 85 or older. The Census Bureau now projects that by 2040 over 19 percent of this group will be 85 or older. The over-85 group, often called the oldest old, is the fastest growing segment of the American population. According to

this study, the cost of caring for the oldest old could rise from the \$9.2 billion spent in 1987 to as much as \$57.4 billion by 2040.

The researchers looked at two age-dependent disorders—dementia and hip fracture. These disorders contribute significantly to disability, nursing home admissions, and the need for long-term care.

The prevalence of dementia, the most common form of which is Alzheimer's disease, increases with age. The growth of the oldest population therefore could result in a three- to fivefold increase in dementia patients, requiring as much as \$150 billion per year for their care.

Women age 85 and above are a particularly high risk for hip fracture. Approximately 20 percent of women who experience a hip fracture do not survive the first year; another 20 percent never regain the ability to walk without assistance. Schneider and Guralnik project without improved prevention efforts, the number of hip fractures could reach 840,000 a year, driving the cost of care up to \$6 billion annually.

As the population ages, escalating health care costs are of increasing concern to policy makers and individual families. Long-term solutions for projected increases in these costs must encompass more than cost containment strategies. Schneider and Guralnik recommend that research resources be mobilized, just as research was set in motion to prevent polio. They suggest that long-term solutions will come from research that identifies ways to prevent the diseases and disorders that disable older persons.

OLDER RURAL POPULATIONS

Moving from one's home can be a stressful experience. How this experience differs for older people living in rural communities is the area of interest for Drs. Patricia L. Colsher and Robert B. Wallace at the University of Iowa in Iowa City. The researchers looked at how relocation in a rural community affects an individual's mental and physical health, and social status. Participants in this study were drawn from the Iowa 65+ Rural Health Study, one of the NIA-funded EPESE's sites. The Iowa participants, all aged 65 and older, originally resided in two rural Iowa counties. These respondents, 1,094 men and 1,883 women, were interviewed and asked about their medical history, physical and mental abilities, and friendships.

At the beginning of the study all participants were asked about their plans to move within the next few years. They were also asked if a physician had diagnosed any major illnesses within the past year. The survey also reported on their participation in clubs, fraternal organizations, and religious groups. During follow-up, the participants were classified as having moved, having made a noninstitutional move, or having been institutionalized.

Drs. Colsher and Wallace administered an index of depressive symptoms to determine if there was an association between the participants' willingness to move and their mental and physical health. They found that participants who did not plan for a move had the poorest physical health and the highest number of doctor visits. Further, these participants also rated high on the index of depressive symptoms and low on levels of life satisfaction.

The researchers observed that the impetus for moving was generally associated with the death of a spouse or the marriage of a child—conditions that may cause people to feel more dependent. According to Drs. Colsher and Wallace, a self-motivated decision to move seems related to the participants' ability to engage in social activities with civil groups and fraternal organizations.

A thorough investigation of the health and socioeconomic circumstances of older rural residents implies the need to study older individuals in the context of their social environment. As rural communities change, complex interactions among older people, their families, other individuals in the community, and various community organizations, institutions, and agencies influence the health and well-being of older rural people. The NIA will continue to investigate the experience of older Americans living in rural communities.

OLDER MINORITY POPULATIONS

The health and longevity of older, minority populations is another priority for the NIA. Recently, the Institute's intramural Epidemiology, Demography, and Biometry Program published data from the EPESE site in North Carolina. The data book provides information on study differences among the black and white segment of the older population including mortality and morbidity, chronic diseases, as well socioeconomic differences between racial groups.

Ethnic Differences in the Use of Health Care Studied

Researchers interested in the use of health services by older Americans have long recognized market heterogeneity that exists among older persons as they age, and the wide variation among older people using health services. Scientists have recently begun to look at how ethnic variations influence physician visits and use of services.

NIA grantee Dr. Frederic D. Wolinsky, and his colleagues at Texas A&M University in College Station, examined data from the 1976-84 Health Interview Survey (HIS) conducted by the National Center for Health Statistics. The HIS is an ongoing annual survey that began in 1956 and is the primary source of all official statistics on health and the use of health services by residents of the United States.

Dr. Wolinsky and his colleagues examined health care use (physician visits and hospitalizations) reported by over 4,000 individuals. The researchers investigated the circumstances under which minority and nonminority older persons would actually use health care services. Although the need for a doctor (illness or disability) is the most immediate cause of visits to a doctor for all older people, there are other circumstances in which the physician visit is primarily an individual choice or discretionary (for example, for minor problems, preventive care, or before symptoms interfere with daily activities). The researchers found that, overall, minority older people are more likely to visit a doctor because of a specific need while their non-minority counterparts appear to have more discretionary visits to the doctor. Analysis of hospitalizations also suggested that minority older people delay seeking a physician's care until health conditions necessitate it and that they don't seek help for less serious illness. The investigators conclude that older minority individuals only seek care when there is an immediate need because of poorer access to health service.

Within the minority older population, there are also indications of heterogeneity that are important in explaining or predicting patterns of health care utilization. Major findings related to the diversity of health care use among several minority subpopulations include the following: (1) Among the Hispanic subpopulations, Puerto Ricans and Mexican Americans face greater socioeconomic disadvantages than their Cuban American counterparts, because a disproportionately larger number of the latter are immigrants with professional backgrounds. This is reflected in health care use among older Cuban Americans that differs from other Hispanic subpopulations; (2) Older African Americans visit the doctor more often than other groups. This may be because they have more serious and limiting health problems; (3) Puerto Ricans and Mexican Americans are more likely to visit a doctor when their physician activity is limited, presumably because they are more likely to have occupations that require physical activity; (4) Puerto Ricans and African Americans appear on average to have longer, annual hospital stays, especially when compared to Anglo Americans; this disparity may be the result of the severity of the condition for hospital admission.

This study documents the differences between minorities and nonminorities in use of health care services and suggests the presence of inequalities among older people in their access to health care services. The differences among ethnic subpopulations of older people in use of services highlights the need to consider the health and health behavior of the five ethnic groups separately. Because of these ethnic differences among older people, NIA will continue to investigate how these variations influence use of hospital and physician services.

AIDS AND OLDER AMERICANS

There is growing public interest in the effects of AIDS on older people. In fact, *AIDS and Older Adults*, an NIA fact sheet published last year by the Institute was one of the most frequently requested publications in 1990. Public interest is just one reason for the NIA's interest in AIDS research. An even greater imperative is that an unexpectedly large number of middle-aged and older adults have the disease. The number of AIDS cases reported in people age 50 and over was 15,435 by October 1990.

HIV-Infected Adults Over 40 Grow Ill and Die Twice as Fast as Young People

NIA intramural scientists Dr. William H. Adler and colleagues at the GRC in Baltimore, MD are conducting research on AIDS in middle-age and older people. In previous years the investigators learned that the disease progresses more rapidly and results in earlier death in people over age 40 than for younger groups. Identifying the reason for this acceleration is one focus of scientists at GRC.

In studying HIV-infected adults over age 60, the investigators found that infected persons lose T cells (those cells involved in immune response) more rapidly than healthy persons the same age. The scientists suspect that this loss of T cells in in-

fectured individuals may be related to age-associated immunodeficiency (the breakdown in efficiency of the immune system). A similar loss in production of functional T cells is also seen in healthy persons as they age.

Dr. Adler and colleagues are finding that infected persons produce fewer functional T cells and produce fewer antibodies, which are molecules produced by the body to fight off foreign viruses (or antigens) such as the AIDS infection.

In the investigators' examination of HIV-infected people, they have identified three groups of antigens associated with the HIV, with each group controlled by a different gene. As the disease progresses, antibodies to two of these genes disappear, while the antibody to one of them remains unchanged. The investigators believe this process may be due to the lack of functional T cells forming in the later stages of the illness which are needed to destroy the AIDS virus.

D. TRAINING AND CAREER DEVELOPMENT IN GERIATRICS AND AGING RESEARCH

In 1989, NIA initiated the Claude D. Pepper Geriatric Research and Training Center program to enhance the ability of institutions with well-developed clinical and research activities in geriatrics to provide a strong environment for the development of future academic leaders in geriatrics. This year, the Home Health Care and Alzheimer's Disease Amendments of 1990 (P.L. 101-557) established the Claude D. Pepper Older Americans Independence Centers. These centers will support research to increase the independence of older people by investigating treatments, medical devices, and other medical interventions that can help people avoid institutionalization or prolonged hospitalization.

NIA also participates in an NIH-wide program to encourage minority investigators. The program provides administrative supplements to ongoing research grants to support minority graduate students, postdoctoral students, or faculty members who conduct research within the scope of the parent grant. The NIA funded 14 of these supplements in fiscal year 1990. In addition, NIA expects to implement a program of grant support for dissertation research by underrepresented minorities in biomedical research. This program is designed to aid the career development of new minority researchers to encourage individuals from a variety of academic disciplines and programs to study aging.

NIA's intramural program—including the GRC and its Laboratory of Neurosciences, and the Epidemiology, Demography, and Biometry program—are a major setting for postdoctoral training of promising young investigators (both M.D.'s and Ph.D.'s) seeking research careers in biomedical and behavioral sciences related to aging research and geriatrics.

Other NIA research and training efforts include the Leadership and Excellence in Alzheimer's Disease (LEAD) awards and a series of summer institutes aimed at recruiting new postdoctoral students into the field of aging research.

NIA also supports traditional individual fellowships and institutional training grants found throughout NIH. The Institute supports Special Emphasis Research Career Awards (SERCA) which provide opportunities for researchers trained in one scientific field to develop expertise in allied fields. NIA is also an active participant in the NIH initiative to provide increased research experience for underrepresented minorities. This initiative is targeted to high schools students, college graduate and undergraduate students, and junior faculty members.

E. OLDER WOMEN'S HEALTH

Women constitute approximately 59 percent of the U.S. population age 65 and above 72 percent of the population 85 and above. Given the preponderance of women in the older age group, NIA has a special interest in supporting research concerning the health and well-being of older women. The Institute is also interested in research to identify predictors of later disability or frailty in older women.

Certain chronic diseases and conditions, such as osteoporosis and incontinence, disproportionately affect women. There are also many questions surrounding the health implications of menopause and hormonal changes in women. In addition, the diseases and conditions which affect both men and women as they age (e.g., Alzheimer's disease, cardiovascular disease, frailty) have a special importance for women because of the high proportion of women in the older population.

Current NIA research directly related to women's health issues include studies of osteoporosis, especially as it relates to hip fractures, physical frailty, incontinence, and hormonal changes with age. Social and behavioral research specific to older women includes the role of older women as both recipients and givers of health care. NIA also supports intramural and extramural longitudinal epidemiological studies to collect data on the health of older men and women, including a longitu-

nal epidemiological study, awarded in 1991, on the causes and course of disability in older women.

NIA's BLSA has been collecting data on female volunteers since 1978 and on men since 1958. Women currently account for 40 percent of the study population and their rate of attrition (due to both death and dropout) is lower than the male participants'. There are over 90 BLSA publications reporting data based on the women participants.

BLSA participants are intensively studied for physiological and behavioral changes: patterns of age changes are identified, mechanisms underlying the changes are elucidated, disease/aging interactions are evaluated, and normal standards as influenced by age are defined. Although there are similarities in age changes between men and women, many differences can be seen. For example, there is a greater rate of bone loss in women. Recent analyses confirm some gender differences in diseases as shown by a higher prevalence of osteoporosis and urinary stress incontinence in women, as well as a later onset and lower prevalence of ischemic heart disease. A special report on women in the BLSA is being prepared at the request of the Senate Appropriations Subcommittee for Labor, Health, and Human Services, and will be distributed in March 1991.

There are inevitably more research opportunities available than can be actively pursued. For example, little is known about the mechanisms of changing hormone effects at the molecular biological level and the health implications of such effects on older women. Research by Dr. Stanley Birge at the Washington University in St. Louis, MO, suggests that estrogens may have a beneficial effect on neuronal function, and that, conversely, the cessation of estrogen function at menopause may be followed by a decrease in neuronal function. Clinical trials of combinations of possible interventions and treatments (such as calcium supplementation, estrogens, and other agents such as etidronate, and exercise) to alleviate or eventually prevent the most serious manifestations of osteoporosis would be highly valuable. Research opportunities also exist for epidemiological studies to evaluate major diseases and conditions responsible for frailty and disability in older women, as well as for studies of cancer in older women. In the social and behavioral arena, studies are needed on the special health concerns of older minority women and of older women living in rural communities. Finally, research into caregiving issues and the effects on later life of women's combined careers as homemakers and labor force participants could also make important contributions to improving the quality of life for America's population of older women.

III. RESEARCH ADVANCES ON AGING SUPPORTED AND CONDUCTED BY OTHER NIH INSTITUTES

A. NATIONAL CANCER INSTITUTE

Cancer incidence increases with increasing age. Americans age 65 and over have ten times the risk of developing cancer than those under age 65; more than 50 percent of all cancers occur in the 12 percent of the population that is over age 65. The National Cancer Institute (NCI) uses the full range of its resources to address this important problem.

Cancer Incidence Rates for Older Americans Studied

The NCI intramural Surveillance Program, which collects statistics to measure the impact of cancer on the U.S. population to assess progress in cancer prevention and treatment, reported that the overall incidence rate for cancer in persons age 65 and older increased 1.4 percent for the years 1973 to 1987, the most recent period for which data have been evaluated. This increase is more than twice the 0.6 percent increase for people under 65 years during the same interval.

The mortality rate for many common cancers declined over the last 15 years, reducing the cancer death rate for White Americans under age 65. But for people over age 65, the overall mortality rate increased 13 percent. For most cancer sites, older Americans also experience poorer survival rates than the younger population.

Scientists Look at Epidemiology of Cancer and Older People

NCI grantee Dr. Annlia Paganini-Hill and colleagues at the University of Southern California School of Medicine in Los Angeles, are studying a group of older Americans living in a retirement community to evaluate the effects of health-related and lifestyle practices on the cause and prevention of cancer and other diseases. The 13,987 participants (8,881 women and 5,106 men) had a median age of 73 in 1981 when the study began.

The researchers questioned the participants about their use of common drugs such as pain-killers, laxatives, and vitamin supplements, and then kept track of the incidence of different diseases over the next 6½ years. In that time, there were 25 cases of kidney cancer. The researchers found that men who take aspirin daily had 6 times the risk of developing kidney cancer than men who did not. The risk for women taking aspirin was only slightly elevated. Aspirin users had no increased risk for any other cancer except a slight increase in colon cancer. No other drug surveyed showed any relationship to incidence of cancer.

The researchers also evaluated the effect of cigarette smoking on hormone-related diseases such as endometrial, breast, and prostate cancers, and hip fractures. They found that current smokers had a lower risk of endometrial cancer, although it is doubtful that smoking had any true protective effect. Women who smoke had an increased risk of hip fracture and there was some evidence that men who smoke have an increasing risk of prostate cancer with increasing number of cigarettes smoked.

Researchers Study Use of Mammograms by Older Women

NCI provided important technical assistance for a study conducted by the Jacobs Institute of Women's Health in Washington, DC, that found women are not getting mammograms as often as they should, and that women over age 65 are the least likely to do so. The survey of 980 American women age 40 and older examined use of mammography and attitudes toward this early detection procedure. About 65 percent of the women between age 60 and 69 had ever had a mammogram. This is higher than a 1987 survey that showed only 38 percent had undergone the screening. However, only 24 percent of women age 60 and 69 have regular mammograms in accord with the guidelines recommended by 13 national medical organizations, including NCI. These guidelines recommend that all women age 50 and over should have annual mammograms and clinical breast exams. Adult women of all ages should perform monthly self-examinations.

B. NATIONAL HEART, LUNG, AND BLOOD INSTITUTE

The National Heart, Lung, and Blood Institute (NHLBI) supports and conducts aging research related to normal function and diseases of the heart, blood vessels, lungs, and blood.

Alzheimer-Linked Protein Investigated

Amyloid protein deposits in the brain are usually associated with Alzheimer's disease and Down Syndrome. The amyloid beta protein is derived from a large protein precursor, amyloid precursor protein. Human platelet granules have been found to contain a large amount of the amyloid precursor protein and to release it upon activation. NHLBI-supported investigators led by Dr. George Broze at Washington University School of Medicine in St. Louis, MO, have shown that this protein is an inhibitor of coagulation Factor XIa, a deficiency of which is responsible for a mild to moderate degree of bleeding. Thus, it is strongly suggested that amyloid precursor protein may play a role in the regulation of coagulation. Additional evidence of this interrelationship comes from studies of people with cerebral amyloid angiopathy, which is characterized by nontraumatic brain hemorrhages. A mutation in the genetic region coding for Alzheimer's precursor seems almost certain to be the primary defect in these patients.

Aging Heart Studies

It is well known that the older heart, when stimulated by beta-adrenergic agents, responds with weakened contraction compared to the young heart. Dr. James Dobson, a NHLBI grantee at the University of Massachusetts Medical School in Worcester has observed that levels of adenosine, which possesses anti-adrenergic properties, are greater in old than in young rat hearts. Dobson treated hearts from young and old rats with adenosine deaminase, the enzyme that destroys adenosine. He found that the increase in adenosine in older hearts was not due to an increase in the activity of the enzyme responsible for the production of adenosine, or to decreased adenosine deaminase activity. This suggests that the increase in adenosine found in aged hearts may result from other causes.

Scientists Study Cardiovascular Health

The NHLBI-supported Cardiovascular Health Study, a 6-year, multicenter study of people age 65 or older who live in the community, is investigating risk factors for heart disease and stroke in older people. Fifty-seven percent of the 5,201 participants are women. Principal investigator Dr. Richard Kronnal at the University of Washington in Seattle reports early findings include a high frequency of impaired

glucose tolerance, mild to moderate renal insufficiency, lower extremity arterial insufficiency, and abnormal cardiac function.

C. NATIONAL INSTITUTE OF DENTAL RESEARCH

The National Institute of Dental Research (NIDR) recently published its Long-Range Plan for the Nineties. This plan sets a high priority on the oral health of adults and older Americans.

Research and Action Are Fostered by a Unique Program

The NIDR *Research and Action Program to Improve the Oral Health of Older Americans and Other Adults at High Risk*, serves as an umbrella for a wide range of activities involving collaboration with many public and private organizations. NIDR is guiding the research component. An Oral Health Coordinating Committee has been established for Public Health Service agencies, contracts awarded for epidemiological and prevention studies, and funds provided to establish a consortium of public and private groups to facilitate health promotion.

NIDR Staff Contribute to IOM Studies on Aging

For an Institute of Medicine (IOM) study on Health Promotion and Disability Prevention for the Second Fifty, NIDR intramural scientist Dr. Helen Gift and colleagues prepared a literature review and wrote a chapter for the project report, presenting oral diseases and their complications as disabling and handicapping conditions that can be prevented. Gift offered recommendations for research, education, and health promotion.

Scientists Study Downward Trend in Caries

NIDR intramural researchers Drs. L. Jackson Brown and Philip A. Swango reported that for the first time, the mean number of decayed, missing, and filled teeth has declined among American, employed adults age 18 to 44 years old. These improvements, shown in 1985 survey data, are reported for all teeth, in both males and females, and for all regions of the country. This downward trend is expected to have a major, positive impact on the oral health status of older adults in years to come.

Risk Factors for Root Surface Caries Are Identified

NIDR grantee Dr. Paul F. DePaola at the Forsyth Dental Center in Boston, MA, is analyzing clinical data on root surface lesions in more than 300 adults, approximately 45 to 64 years old. DePaola and colleagues have shown positive correlations between root surface lesions and the extent of coronal caries and restorations, debris and calculus, gingivitis, root surface recession, *Streptococcus mutans* (oral bacteria associated with caries) in plaque, and exposure to cariogenic food items. These findings suggest that risk factors for root surface caries are strongly related to those for enamel caries.

Most Oral Senses Do Not Change With Age

NIDR intramural scientists Drs. James Weiffenbach, Carolyn Tylenda, and Bruce Baum studied oral sensitivity to several types of taste and nontaste stimuli in 87 healthy men and women between age 25 and 93. Differences in perception of taste (sugar and salt), temperature (heated or chilled water), pressure (local pressure on the back of the tongue), and viscosity (water thickened with methylcellulose) were measured. Age had no significant effect except on the perception of pressure, which declined significantly with age.

In another intramural study, Drs. Jonathan Ship, Philip Fox, and Bruce Baum demonstrated a great variation in flow rates from the salivary glands of healthy, unmedicated individuals of different ages, suggesting that comparison of individual flow rates against a population standard is an unreliable indicator of salivary dysfunction.

Salivary Gland Function Is Not Influenced by Menopause

Intramural researchers Drs. Jonathan Ship, Lauren Patton, and Carolyn Tylenda, assessed salivary function in healthy premenopausal and postmenopausal females, including women receiving estrogen therapy. None of the women complained of dry mouth or burning mouth, and no changes were observed in salivary output, suggesting that salivary gland function among healthy women is not influenced significantly by menopause or hormonal replacement therapy.

D. NATIONAL INSTITUTE OF DIABETES AND DIGESTIVE AND KIDNEY DISEASES

The National Institute of Diabetes and Digestive and Kidney Diseases (NIDDK) conducts and supports research into the causes, treatment, and prevention of many of the most chronic and disabling diseases affecting public health. Among some of the diseases under study that disproportionately affect older people are osteoporosis and benign prostatic hyperplasia.

Researchers Shed Light on Vitamin D Receptors

Vitamin D is a steroid hormone-like molecule that stimulates calcium absorption and has direct effects on bone. Recent studies by NIDDK intramural researchers Dr. Stephen Marx and colleagues, focus on the way vitamin D activates its receptors. Like receptors for other steroid hormones, the receptors for vitamin D are within the cell rather than on the cell surface. It has long been thought that these receptors sit on the cell's DNA, waiting to be turned on. The NIDDK scientists, using a method they developed for fixing cells so that receptor activation can be visualized, have now discovered that the receptors do not reside on the DNA in the cell nucleus but rather are dispersed in the cell's cytoplasm. When vitamin D is added to the cells, however, the receptors rapidly clump and move into the cell nucleus. The fixation method, which is based on the use of microwave irradiation, also allowed the researchers to observe the activity of cGMP, a second messenger involved in the action of vitamin D and other hormones. They found that, in response to vitamin D activation, cGMP increases and accumulates around the vitamin D receptors. The cell fixation method developed by these investigators and the observations from their studies are important to an understanding of steroid hormones and how they affect calcium absorption and bone metabolism.

Growth Factor Plays a Role in Prostate Growth

Benign prostatic hyperplasia (BPH), or prostate enlargement, is a common disorder affecting older men, with 400,000 surgeries performed each year to relieve its symptoms. Researchers know that prostate growth begins in men in their 20's and 30's but usually does not cause symptoms until age 50 or older. Recent research studies have focused on factors that regulate growth in the hope of identifying the factors that initiate abnormal growth.

Studies by Dr. John Grayhack and associates at the NIDDK-supported George M. O'Brien Kidney and Urologic Diseases Research Center at Northwestern University in Chicago, IL, have shown that, in addition to male sex hormones (androgens), the rat testes secrete a substance that plays a role in enhancing the androgen-stimulated growth of the prostate. In related studies, NIDDK grantee Dr. Russell Lawson and colleagues at the Medical College of Wisconsin in Milwaukee, using human prostate cells grown in a cell culture, have found that specific substances called growth factors can inhibit or enhance the growth of cells derived from the human prostate.

These findings provide new insights into the long-held theory that prostate growth and the development of BPH are regulated solely by male sex hormones. This research paves the way for the development of agents to regulate and arrest prostate cell growth before the symptoms of BPH begin.

E. NATIONAL INSTITUTE OF NEUROLOGICAL DISORDERS AND STROKE

Research at the National Institute of Neurological Disorders and Stroke (NINDS) focuses on several nervous system disorders that diminish the quality of later life. Current research programs at NINDS include studies of Parkinson's disease, Alzheimer's disease, and stroke, all neurological problems that become increasingly common as people age. (NINDS research on the latter two disorders is described in separate reports.)

More than half a million people in the United States, most of them over age 60, have Parkinson's disease, whose tremors, rigidity, and difficulty with speech and movement can make even simple tasks impossible. NINDS scientists are concentrating their efforts on finding the cause(s) and improving treatments.

Understanding Parkinson's Disease

Dopamine is one of several chemical messengers in the brain that helps transmit signals from one nerve to another. It is produced in the region of the brain called the substantia nigra. In Parkinson's disease, nerve cells in the substantia nigra die off prematurely, reducing the levels of the transmitter chemical dopamine.

Scientists have found that MPTP causes brain degeneration that stimulates Parkinson symptoms. NINDS grantee Dr. Richard E. Heikkila at the Robert Wood Johnson Medical School in Piscataway, NJ, discovered that by using multiple MPTP

injections he could create this condition in mice. Through the use of compounds structurally related to MPTP, Heikkila found that three events must occur for the injection to produce Parkinson-like symptoms: the compounds must be acted upon by the brain's enzyme MAO-A (monoamine oxidase), they must be transported to the dopaminergic system, and they must interfere with the normal function of the cell's energy factories. Additionally, Heikkila found that some mice strains became a great deal sicker than did others, and older mice showed more signs of brain injury than younger ones. Future study will focus on understanding why the strain or age of the mice appears to affect the outcome.

Exploring Drug Therapy

In a continuing clinical trial, NINDS grantee Dr. Ira Shoulson at the University of Rochester in New York, is studying the drugs deprenyl and tocopherol in treating Parkinson's patients. Results show a highly significant delay of up to 10 to 12 months for early-stage Parkinson's disease in the groups receiving deprenyl alone or in combination. These results were so significant that participants were regrouped after just 9 months (rather than the proposed 5-year study period) so that all patients would receive some form of deprenyl. Further study will test the long-term effects of deprenyl and the value of tocopherol in combination with deprenyl.

New Theory for Parkinson's Disease Tested

A preliminary study finds that the rigidity and tremors symptomatic of Parkinson's disease may be associated with excessive activity in the part of the brain called the subthalamic nucleus. NINDS grantee Dr. Mahlon DeLong and colleagues, formerly of The Johns Hopkins University School of Medicine in Baltimore, MD, and currently at Emory University in Atlanta, GA, report that two MPTP-treated monkeys demonstrated marked improvement of Parkinson-like symptoms when injected with a chemical that killed the nerve cells in the subthalamic nucleus.

In a normally functioning brain, dopamine acts as a neurotransmitter to regulate electrical activity in the nerve cells of the motor system. Experimental reduction of dopamine production with MPTP results in over-activity of nerve cells in the subthalamic nucleus and produces the tremors and rigidity characteristic of Parkinson's disease. DeLong showed that destroying this now-unregulated region of the brain resulted in a reversal of Parkinson symptoms. The study contributes to a better understanding of dopamine in brain functioning.

F. NATIONAL INSTITUTE OF ALLERGY AND INFECTIOUS DISEASES

Influenza, an acute respiratory infection caused by a virus, can result in extended hospitalizations and even death for many people over age 65. Immunization against influenza has been universally recommended for this population. The National Institute of Allergy and Infectious Diseases (NIAID) conducts and supports research on the biology of many of the organisms that cause viral infections such as influenza.

Scientists Study Influenza Vaccines

NIAID contractors Dr. John J. Treanor and Dr. Robert F. Betts and colleagues at the University of Rochester Medical Center in New York, evaluated the combination of a live cold-adapted influenza A vaccine with an inactivated flu vaccine in 151 nursing home residents aged 66-102 (average age: 80). Influenza A is the most prevalent type of flu. Residents of nursing homes are at special risk for influenza because they often have chronic medical conditions that increase susceptibility to infection and possible complications. They are also in a closed environment that fosters transmission of some infectious diseases.

Live-virus vaccines are thought to provide more complete and long-lasting protection than the more commonly used inactivated vaccines, but they carry the risk of causing symptoms of the illness they are intended to prevent. Live cold-adapted influenza vaccines consist of live virus that is less virulent. The live virus is also weakened or "attenuated" into a formula that serves as a safe, yet protective vaccine for humans. Unlike inactivated influenza vaccines, which are given in intramuscular injections, the live influenza vaccine is administered through nose drops.

In the nursing home study, all participants received the inactivated vaccine plus either the live vaccine or a placebo. The live vaccine caused no significant ill effects. During a subsequent outbreak of influenza A, residents who had received both vaccines had lower rates of influenza illness, characterized by fever and upper respiratory symptoms such as cough, than did the recipients of the inactivated vaccine alone. Researchers concluded that a combination of live and inactivated vaccines

may provide greater protection than inactivated vaccine alone against influenza A in nursing home populations.

Two other NIAID studies examined live-virus vaccines against influenza B, a type that causes widespread epidemics every 3 to 4 years. Although the age of the volunteers in these studies ranged from 18 to 40, the findings could have great significance for older people through the development of improved influenza vaccines.

A study by NIAID intramural scientist Dr. Brian R. Murphy and NIAID contractor Dr. Mary Lou Clements, at The Johns Hopkins University in Baltimore, MD and colleagues, explored the effectiveness of a live-virus, cold-adapted vaccine called Influenza B/Ann Arbor/86. The research focused on the vaccine's safety and potency in 66 volunteers. Some received the vaccine and others a dose of the live influenza B virus. None of the participants who received the vaccine developed symptoms of influenza illness. Vaccinated participants were later re-exposed to an active influenza virus and again did not become ill. Murphy and Clements concluded that this influenza B vaccine maintains a high degree of protection against influenza illness in adults and could be used as an alternative to the inactivated influenza B vaccines.

In another NIAID-supported study led by contractor Dr. Wendy A. Keitel at Baylor College of Medicine in Houston, TX, researchers gave young adult volunteers intranasal doses of live cold-adapted vaccine called Influenza B/Texas/1/84 to test its safety and protective qualities.

Sixteen volunteers received intranasal doses of the influenza B virus, 65 were given the cold-adapted Influenza B/Texas/1/84 vaccine, and 17 were given a placebo. The illness reported by participants was so mild that it would not have been apparent unless specifically sought. This vaccine was well tolerated generally and offered short-term protection against influenza symptoms. Keitel concluded that the vaccine is a safe agent for the group in this study and recommended more research on the safety of similar vaccines for influenza B in other populations.

NATIONAL EYE INSTITUTE

Age-related eye diseases threaten the quality of life for many older Americans. In fact, half of this country's visually impaired citizens are 65 or older. Although older people currently account for one-third of all-visits for medical eye care, research advances have improved the chances of maintaining good visual health well into retirement. The National Eye Institute (NEI) supports a major research effort to reduce the burden of aging-related eye diseases.

Evaluation of Laser Surgery as an Initial Glaucoma Treatment

Glaucoma is the second leading cause of blindness among all Americans and the leading cause of blindness among African Americans. Each year approximately 4,600 people become blind from glaucoma, the vast majority from open-angle glaucoma. In open-angle glaucoma, microscopic changes in the eye interfere with the flow of fluids that nourish tissues in the front of the eye. When these fluids fail to drain properly, increased pressure inside the eye can slowly damage the optic nerve.

Eye specialists usually treat newly diagnosed glaucoma patients with medical therapy in the form of eyedrops, either to improve fluid drainage or to slow fluid formation. If drops alone do not bring the eye pressure to an acceptable level, the physician may use laser surgery to create a tiny hole in the coat of the eye or stretch open holes in the drainage tissue. Some doctors have begun to use lasers for the initial treatment of glaucoma.

Although there are advantages and disadvantages to both forms of treatment, the two have not been compared under controlled conditions. To do this, NEI funded the Glaucoma Laser Trial, a randomized, controlled, clinical study that is evaluating the risks and benefits of both treatments.

To ensure that one eye of each study participant would receive the better treatment, all 271 participants received both treatments, one method in each eye. If the initial treatment with either laser surgery or medicated eyedrops failed to achieve adequate control of ocular pressure, additional eyedrops were administered according to a stepped sequence. The sequence progressed from milder to stronger eyedrops or combinations.

After 2 years, the researchers found that laser treatment alone resulted in pressure control in 44 percent of the participant's eyes. Pressure was controlled in 30 percent of the eyes treated with the mildest eyedrop, timolol. When timolol was used after laser treatment, pressure was controlled in 70 percent of the eyes. When eyes in either treatment group required stronger eyedrops, pressure was controlled in 89 percent of those having prior laser treatment and in 66 percent of those who received only medication.

Participants will be followed for an additional 3 years to determine if lasers are a safe and effective alternative to eyedrops as a first line of treatment.

H. NATIONAL INSTITUTE OF ENVIRONMENTAL HEALTH SCIENCES

The National Institute of Environmental Health Sciences (NIEHS) conducts basic and applied research into aging processes and how environmental factors influence aging. Cellular mechanisms of aging, the effects of chemicals on cellular repair, and diseases related to aging are investigated by intramural scientists and NIEHS grantees.

Genetic Basis of Aging Studied

NIEHS intramural scientists Dr. Osamu Sugawara, Lois Annab, and Dr. J. Carl Barrett studied genetic factors related to aging cells in culture. Normal human and hamster cells have limited life span in culture before they cease growing; tumor cells grow indefinitely. The NIEHS team working with cultured cells made up of hamster tumor cell genes inserted into human chromosome 1 genetic material, discovered that hamster tumor cells missing copies of human chromosome 1 are immortal. They also found that reintroduction of human chromosome 1 caused these cells to act like normal cells and stop growing. These studies indicate that defects in genes of human chromosome 1 are involved in senescence and cancer. Efforts in progress to clone senescent genes may lead to new insights into both cancer and aging processes.

Scientists Look at Environmental Issues

NIEHS grantee Dr. Jane Q. Koenig at the University of Washington in Seattle, is studying the effects of sulfur dioxide on lung function in people over age 55. Previous epidemiologic data indicate that older people are at risk for lung disease or death during periods of poor air quality. Koenig is determining whether age alone makes a person more susceptible to the effects of inhaled air pollutants.

NIEHS-supported scientists are also conducting studies to determine whether the continuing depletion of the protective ozone layer of the atmosphere will lead to increased human exposure to ultraviolet (UV) radiation. Known effects of UV radiation in humans include skin cancers and immunosuppression. In addition, toxicologic studies of UV radiation in mice revealed that as the dose was increased, the life span of the mice was shortened. It is not clear that the same effect would occur in humans, but additional studies are being conducted in other mammals and animals.

Dr. Ronald D. Ley at the Lovelace Medical Foundation in Albuquerque, NM, is also studying the effects of chronic UV radiation. His studies are conducted using the South American opossum because it has DNA repair capabilities very similar to humans. Results from these experiments and others will enable scientists to evaluate the life-shortening potential of UV radiation.

I. NATIONAL INSTITUTE OF ARTHRITIS AND MUSCULOSKELETAL AND SKIN DISEASES

The National Institute of Arthritis and Musculoskeletal and Skin Diseases (NIAMS) places a high priority on research on the musculoskeletal problems faced by an aging population, particularly osteoporosis, osteoarthritis, and Paget's disease.

Advances Made in the Prevention and Treatment of Osteoporosis

NIAMS leads and coordinates biomedical research to improve the diagnosis, treatment, and prevention of osteoporosis. The Institute sponsors basic research on bone biology and bone metabolism, funds Specialized Centers of Research (SCORs) on osteoporosis, conducts clinical trials, and performs educational research.

As part of this mandate, in February, 1990, NIAMS cosponsored a conference with NIA, NIDDK, the National Osteoporosis Foundation, and the American Society for Bone and Mineral Research on research advances in osteoporosis. A report summarizing the participants' recommendations and the state-of-the-art in osteoporosis research soon will be published.

NIAMS grantee Dr. Robert Lindsay at the Helen Hayes Hospital in West Haverstraw, NY, one of three SCORs on osteoporosis, reported a 2-year controlled study confirming the usefulness of estrogen in treating women with postmenopausal osteoporosis. Research revealed that in these women, oral estrogen supplemented by calcium resulted in increased bone mass in the spine by 10.6 percent and in the hip by 5.5 percent.

In a study of bone mineral density in the upper thigh bone of 263 women age 20 to 84, NIAMS grantee Dr. J.C. Gallagher at Creighton University Medical School SCOR in Omaha, NE, found that during the first 6 years after menopause, the decrease in bone mineral density was 3 to 10 times higher than the levels in the

decade prior to menopause. These findings underscore the importance of starting estrogen replacement therapy right after menopause.

In postmenopausal osteoporosis, poor absorption of calcium, the chief mineral substance in bone, is often associated with reduced blood levels of 1,25-dihydroxyvitamin D. Gallagher and NIAMS grantee Dr. B. Lawrence Riggs at the Mayo Clinic in Rochester, MN, recently reported that treatment twice daily with a vitamin D analog improves calcium absorption and reduces the spinal fracture rate.

Because sodium fluoride builds bone mass, it once was thought to be an answer for treating osteoporosis. Clinical trials led by Riggs and NIAMS grantee Dr. Michael Kleerekoper at Henry Ford Hospital in Detroit, MI, found that although sodium fluoride increases bone mass in the spine, the bone is still susceptible to fracture.

Weight Is Linked to Osteoarthritis

Dr. David T. Felson at the NIAMS Multipurpose Arthritis Center at Boston University in Massachusetts, studied osteoarthritis of the knee and examined x-rays taken between 1983 and 1985 of participants in a long-term population study conducted in Framingham, MA. He found a direct relationship between weight and the risk of knee osteoarthritis, particularly in women.

Knowledge of Paget's Disease Improves Through Osteoclast Study

Bone constantly undergoes formation by cells called osteoblasts and resorption by cells called osteoclasts. Normally, this process remains in balance. However, in Paget's Disease, osteoclasts may play a major role as the process speeds up and the bone produced is dense but fragile. To better understand the biology of these cells, Drs. Gregory R. Mundy and G. David Roodman at the Audie L. Murphy VA Hospital in San Antonio, TX, compared Paget's bone marrow cultures with normal cultures and found that osteoclasts not only exhibited a number of abnormal characteristics, but their rate of formation was 10- to 20-fold greater in the Paget's cultures.

J. NATIONAL INSTITUTE ON DEAFNESS AND OTHER COMMUNICATION DISORDERS

The National Institute on Deafness and Other Communication Disorders (NIDCD) conducts and supports research and research training on normal hearing and on disorders of hearing and other communication processes. The Institute studies diseases affecting hearing, balance, smell, taste, voice, speech, and language. Research on communication disorders throughout the life span includes studies of hearing loss in older persons.

Scientists Study Presbycusis

Every year after age 50, many individuals lose some hearing ability. The decline is gradual and progressive so that by age 60 or 70 as many as 25 percent of older persons are noticeably hearing impaired. One form of hearing loss affecting older persons is sensorineural hearing loss. Sound is transmitted efficiently through the external and middle ears, but parts of the inner ear or auditory nerve may be damaged or destroyed. Presbycusis is a common type of sensorineural hearing loss in older people. In presbycusis, changes in the inner ear lead to difficulties in understanding speech, and possibly an intolerance for loud sounds, but not total deafness. Symptoms of presbycusis are different in each person, suggesting a genetic predisposition. Although presbycusis is usually attributed to aging, because it does not affect everyone, some investigators view it as a disease. Environmental noise, certain medications, improper diet, and genetic make-up may contribute to this disorder.

In basic studies on presbycusis, Dr. Donald Casary and colleagues at Southern Illinois University School of Medicine in Springfield, have reported that neurochemical faults may underlie certain auditory processing disorders found in presbycusis. These findings are among a number of NIDCD-funded studies that suggest that the aging-related loss of neurotransmitters occurs in some auditory brain structures and not in others. (Research is now in progress to correlate age-related loss of specific auditory functions with alterations in neurotransmitter function.) In the past, it was believed that hearing loss in aging was largely the result of a cumulative loss of hair cells in the cochlea, noise exposure, and genetic predisposition. However, the site-specific depletion of neurotransmitters suggests that missing hair cells is not a complete explanation for presbycusis.

Other NIDCD-supported scientists are investigating the interaction between the hearing loss produced by repeated, lifelong exposure to noise (including occupational noise) and the hearing loss associated with aging. NIDCD and the NIH Office of Medical Applications of Research sponsored a Consensus Development Conference on noise and hearing loss in January 1990. Dr. John Mills, at the Medical Universi-

ty of South Carolina in Charleston, reported that a significant portion of age-related hearing loss seems to be the result of exposure to noise rather than a consequence of aging. Mills notes that only recently has an animal model been available for the study of presbycusis.

Clinical intervention in presbycusis includes detection, measurement, and rehabilitation (including hearing aid use). Currently, these methods are effective but their positive effects on both communication skills and psychosocial well-being need better documentation. Scientists are striving to develop improved methods of intervention. Better hearing aids are being developed and the efficacy of their use and acceptability to users who are older is being addressed by NIDCD-funded investigators. Researchers are also hopeful that earlier intervention may improve functioning over the course of the loss. New psychoacoustic and audiologic diagnostic methods may permit identification of patients who have a poor prognosis for successful use of hearing aids and lead to an appropriate modification of rehabilitative strategies.

NIDCD will continue to encourage research to acquire longitudinal data on normal-hearing older persons, or noise-aging interactions, and on interactions of age with other agents, particularly medications. In addition, family studies will help elucidate the genetic component of hearing loss. Additional studies will document the impact of presbycusis on both individuals and society.

K. NATIONAL CENTER FOR RESEARCH RESOURCES

Shared facilities provided by the National Center for Research Resources (NCRR) support a variety of studies focused on aging. Recently, grantees of the General Clinical Research Centers (GCRC) program found that a drug used to treat breast cancer also may increase bone mass in women who are susceptible to osteoporosis. Other GCRC grantees have documented the effect of stomach acid on absorption of drugs in older people.

Breast Cancer Drug May Prevent Osteoporosis

A drug used to treat breast cancer may protect against osteoporosis, according to NCRR grantee Dr. Ethel Siris at the Columbia-Presbyterian Medical Center GCRC in New York City. Siris found that the drug tamoxifen may mimic estrogen in bone cells and help prevent bone loss. In breast cancer cells, tamoxifen appears to have the opposite effect, inhibiting the cancer-promoting effects of estrogen.

Siris notes that estrogen stimulates growth of tumors in about 70 percent of postmenopausal breast cancer patients. Tamoxifen, a widely accepted breast cancer therapy, binds with estrogen receptors on tumor cells and thereby blocks the action of estrogen.

Physicians had worried that tamoxifen would block the protective effects of estrogen on bone tissue, leading to osteoporosis. But Siris and colleagues found that bone density in ten breast cancer patients who had been taking tamoxifen twice daily for 1 year actually showed a slight overall increase in bone mass during the 1-year study. A matched group of participants who did not take tamoxifen showed a significant decrease. The investigators are expanding their research with a 5-year study of tamoxifen's potential for preventing osteoporosis.

Stomach Acid Affects Drug Absorption

The level of acidity in the stomach is lower in a significant portion of older people than in the young, according to NCRR grantee Dr. Jennifer B. Dressman at the University of Michigan GCRC in Ann Arbor. Because the acidity level in the stomach can affect the absorption of certain drugs, Dressman and her colleagues believe that many older people may require an adjustment in the dose or selection of drugs prescribed for them.

In a study of 80 healthy older people, Dressman found that about 10 percent of the participants experienced excessively low stomach acid levels both before and after meals. Another 40 percent of the participants needed an abnormally long time for stomach acid levels to return to normal after meals. In participants with poor gastric acid secretion, drug absorption rates were significantly lower than in older participants with unimpaired acid secretion.

The study, conducted in the GCRC's controlled environment, used statistical and dietary resources of the GCRC to evaluate participants' digestion. Dressman monitored the levels of acidity in participants' stomach and intestines before and shortly after they ate. Participants with a history of diseases likely to affect the gastrointestinal tract were excluded from participation. In the second part of the study, absorption of the cardiovascular drug dipyridamole was compared in participants with low and normal acid secretions.

On the basis of these findings, Dressman estimates that as many as 2 million Americans over age 65 might need adjustments in their prescriptions. Absorption rates would be especially significant for some orally administered cardiovascular and blood pressure medications, calcium supplements, and antifungal drugs.

L. NATIONAL CENTER FOR NURSING RESEARCH

The National Center for Nursing Research's (NCNR) interest in aging focuses on the causes of mental and physical dysfunction in older Americans, and on better ways to help them maintain their physical and mental functional abilities.

Muscle Strength Exercise Techniques May Prevent and Treat Urinary Incontinence

Pelvic muscle exercises often are prescribed to prevent or treat urinary incontinence (UI). Earlier reports of success in controlling UI have varied depending on the techniques used, the type of UI, and the age or health of the study participants.

While UI is a common problem in older women, it also is found in younger women, particularly following childbirth. NCNR grantee Dr. Molly Dougherty and colleagues at the University of Florida College of Nursing, in Gainesville, designed a study to determine the optimum intensity and duration of pelvic muscle exercises needed to significantly increase pelvic muscle strength in healthy, reproductive-age women. Using principles of exercise physiology, the investigators prescribed exercises that emphasize gradual, sustained effort. The 48 women in the study performed the exercise every other day, gradually increasing the number and duration.

The investigators found this protocol led to a significant improvement in pelvic muscle strength. In addition, results indicate that improvement occurs with exercise intensity at much lower levels than had previously been reported in the literature. The investigators will now consider how this regiment will work in an older population.

IV. OUTLOOK

Aging touches the life of everyone. For generations, philosophers and scientists alike have sought answers to questions that strike at the very core of aging research.

We experience the impact of aging daily—as we watch ourselves grow and change; as we assist our aging family members. These profound personal changes ripple outward to our society as a whole. The implications of the demographic shift to an aging society has raised the debate on these issues to a national level.

NIH conducts and supports research that affects our understanding of aging processes as well as our ability to assure people a healthy and independent old age. Success in these research efforts provides science and society alike with some of the most exciting frontiers of the decade.

NATIONAL INSTITUTE ON AGING ACTIVE GRANTS IN FY90						PAGE	1
GRANT NUMBER	PRINCIPAL INVESTIGATOR TITLE	BUDGET START	DATES END	INSTITUTION	TOTAL		
11-30-90							
5 T32AG00029-15	COHEN, HARVEY J BEHAVIOR AND PHYSIOLOGY IN AGING	09-01-90	06-30-91	DUKE UNIVERSITY	189,577		
5 R01AG00029-16	PATTERSON, DAVID GENE EXPRESSION IN SOMATIC CELLS IN THE AGING PROCESS	06-01-90	05-31-91	ELEANOR ROOSEVELT INST FOR CANCER RES	368,864		
5 T32AG00030-14	STORANDT, MARTHA A AGING AND DEVELOPMENT	09-01-90	08-31-91	WASHINGTON UNIVERSITY	191,340		
5 T32AG00037-14	BENOTSON, VERN L MULTIDISCIPLINARY RESEARCH TRAINING IN GERONTOLOGY	09-01-90	08-31-91	UNIVERSITY OF SOUTHERN CALIFORNIA	414,812		
5 T32AG00045-14	CLARK, M MARGARET ANTHROPOLOGICAL GERONTOLOGY	09-01-90	08-31-91	UNIVERSITY OF CALIFORNIA SAN FRANCISCO	166,711		
3 T32AG00048-1351	Z'BIT, STEVEN H GERONTOLOGY	07-01-90	04-30-91	PENNSYLVANIA STATE UNIVERSITY-UNIV PARK	136,053		
5 T32AG00056-08	KAHANA, EVA F HEALTH RESEARCH IN AGING	09-01-90	06-30-91	CASE WESTERN RESERVE UNIVERSITY	72,242		
5 T32AG00057-13	MARTIN, GEORGE M GENETIC APPROACHES TO AGING RESEARCH	07-01-90	04-30-91	UNIVERSITY OF WASHINGTON	297,879		
2 T32AG00078-11	HOLLOSZY, JOHN O EXERCISE AS PREVENTIVE MEDICINE IN THE AGING PROCESS	09-01-90	06-30-91	WASHINGTON UNIVERSITY	144,210		
5 T32AG00080-11	KLINMAN, NORMAN R IMMUNOLOGICAL & NEUROBIOLOGICAL ASPECTS OF AGING	09-01-90	06-30-91	SCRIPPS CLINIC AND RESEARCH FOUNDATION	135,451		
*2 T35AG00086-11	SISKIND, GREGORY M SHORT-TERM TRAINING STUDENTS IN HEALTH PROF SCHOOLS	04-15-90	04-14-91	CORNELL UNIVERSITY MEDICAL CENTER	60,203		
5 T35AG00089-10	FLANAGAN, THOMAS D SHORT-TERM RESEARCH TRAINING	09-01-90	08-31-91	STATE UNIVERSITY OF NEW YORK AT BUFFALO	67,091		
	BAH022						

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GRANT NUMBER	PRINCIPAL INVESTIGATOR TITLE	BUDGET START	DATES END	INSTITUTION	TOTAL
5 T32A000093-09	FINCH, CALEB E ENDOCRINOLOGY AND NEUROBIOLOGY OF AGING	09-01-90	08-31-91	UNIVERSITY OF SOUTHERN CALIFORNIA	337,804
5 T32A000096-09	COTHAN, CARL W NEUROBIOLOGY OF AGING	09-01-90	08-31-91	UNIVERSITY OF CALIFORNIA IRVINE	182,520
5 T32A000105-07	CAPLAN, ARNOLD I CELLULAR AND MOLECULAR AGING	09-01-90	06-30-91	CASE WESTERN RESERVE UNIVERSITY	135,630
5 T32A000107-07	COLEMAN, PAUL D TRAINING IN GERIATRICS AND NEUROBIOLOGY OF AGING	03-01-90	02-28-91	UNIVERSITY OF ROCHESTER	238,920
2 T32A000110-06	NESSERLOADE, JOHN R TRAINING IN AGING RESEARCH METHODOLOGY	07-01-90	04-30-91	PENNSYLVANIA STATE UNIVERSITY-UNIV PARK	43,180
5 T32A000111-08	SISKIND, OREGORY M IMMUNOBIOLOGY OF AGING	09-01-90	08-31-91	CORNELL UNIVERSITY MEDICAL CENTER	84,518
2 T32A000114-06	ADELMAN, RICHARD C MULTIDISCIPLINARY RESEARCH TRAINING IN AGING	09-01-90	06-30-91	UNIVERSITY OF MICHIGAN AT ANN ARBOR	239,205
2 T32A000115-06	POLOAR, PETER R PRE- AND POSTDOCTORAL TRAINING IN BIOCHEMISTRY OF AGING	09-01-90	06-30-91	BOSTON UNIVERSITY	208,074
2 T32A000117-06	DUNKLE, RUTH E SOCIAL RESEARCH TRAINING ON APPLIED ISSUES OF AGING	08-01-90	05-31-91	UNIVERSITY OF MICHIGAN AT ANN ARBOR	295,191
5 T32A000120-05	BURTON, JOHN R RESEARCH TRAINING IN GERONTOLOGY AND GERIATRICS	06-01-90	05-31-91	JOHNS HOPKINS UNIVERSITY	156,561
"5 T32A000121-04	HALFORD, ROY L IMMUNOBIOLOGY OF AGING	02-01-90	01-31-91	UNIVERSITY OF CALIFORNIA LOS ANGELES	60,153
5 T32A000123-05	HALTER, JEFFREY B TRAINING PROGRAM IN ENDOCRINOLOGY, METABOLISM, AND AGING	06-01-90	05-31-91	UNIVERSITY OF MICHIGAN AT ANN ARBOR	73,168

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GRANT NUMBER	PRINCIPAL INVESTIGATOR TITLE	BUDGET START	DATES END	INSTITUTION	TOTAL
5 T32A000124-05	HOLT, PETER R DIGESTIVE DISEASE AND AGING TRAINING PROGRAM	09-01-90	08-31-91	ST. LUKE'S ROOSEVELT HOSP CTR (NEW YORK)	63,063
5 T32A000128-03	DE KOSKY, STEVEN T BEHAVIORAL NEUROLOGY OF AGING TRAINING PROGRAM	12-01-89	11-30-90	UNIVERSITY OF PITTSBURGH AT PITTSBURGH	47,255
5 T32A000129-05	BUMPASS, LARRY L POPULATION, LIFE COURSE, AND AGING	07-01-90	06-30-91	UNIVERSITY OF WISCONSIN MADISON	138,247
5 T32A000130-05	KAYSER-JONES, VIRGENE S RESEARCH TRAINING IN GERONTOLOGICAL NURSING	09-01-90	08-31-91	UNIVERSITY OF SAN FRANCISCO	36,683
5 T32A000131-06	CRISTOFALO, VINCENT J TRAINING IN CELLULAR AND MOLECULAR ASPECTS OF AGING	05-01-90	04-30-91	MEDICAL COLLEGE OF PENNSYLVANIA	141,022
5 T32A000134-05	LIANO, JERSEY PUBLIC HEALTH AND AGING	09-01-90	08-31-91	UNIVERSITY OF MICHIGAN AT ANN ARBOR	64,245
5 T32A000139-04	MYERS, GEORGE C MEDICAL DEMOGRAPHY AND SOCIAL EPIDEMIOLOGY OF AGING	12-01-89	11-30-90	DUKE UNIVERSITY	144,452
5 T32A000140-15	SPEARE, ALDEN JR DEMOGRAPHY OF AGING	07-01-90	06-30-91	BROWN UNIVERSITY	30,582
5 T32A000143-05	ORR, HARRY T BEHAVIORAL GENETICS/BIOLOGY OF AGING	09-01-90	08-31-91	UNIVERSITY OF MINNESOTA OF MNPLS-ST PAUL	51,866
5 T32A000144-04	KONAL, JEROME RESEARCH TRAINING IN GERIATRIC MEDICINE	08-01-90	07-31-91	CASE WESTERN RESERVE UNIVERSITY	135,459
5 T32A000149-04	FOLSTEIN, MARSHAL F RESEARCH TRAINING IN THE DEMENTIAS OF AGING	08-01-90	07-31-91	JOHNS HOPKINS UNIVERSITY	138,108
5 T32A000150-03	DOLIN, RAPHAEL TRAINING IN IMMUNOLOGY AND INFECTIOUS DISEASES	07-01-90	06-30-91	UNIVERSITY OF ROCHESTER	106,411

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GRANT NUMBER	PRINCIPAL INVESTIGATOR TITLE	BUDGET START	DATES END	INSTITUTION	TOTAL
5 T32AG00151-04	HERMALIN, ALBERT I DSOCIAL AND ECONOMIC DEMOGRAPHY	07-01-90	06-30-91	UNIVERSITY OF MICHIGAN AT ANN ARBOR	105,283
5 T32AG00153-03	KASL, STANISLAV V RESEARCH TRAINING IN THE EPIDEMIOLOGY OF AGING	07-01-90	06-30-91	YALE UNIVERSITY	167,594
5 T32AG00154-02	REAVEN, GERALD M GERIATRICS GERONTOLOGY	09-01-90	06-30-91	STANFORD UNIVERSITY	121,189
5 T32AG00155-03	ELDER, GLEN H, JR DEMOGRAPHY OF AGING AND THE LIFE COURSE	09-01-90	08-31-91	UNIVERSITY OF NORTH CAROLINA CHAPEL HILL	65,732
5 T32AG00156-02	HORN, JOHN L FORMING SCIENCE CAREERS IN DEVELOPMENTAL NEUROCOGNITION	09-01-90	06-30-91	UNIVERSITY OF SOUTHERN CALIFORNIA	140,888
5 T32AG00158-03	BURINO, JULIE E TRAINING PROGRAM IN EPIDEMIOLOGIC RESEARCH ON AGING	09-01-90	08-31-91	BRIGHAM AND WOMEN'S HOSPITAL	71,267
5 T32AG00159-03	CRIMMINS, EILEEN M DEMOGRAPHY OF AGING	07-01-90	04-30-91	UNIVERSITY OF SOUTHERN CALIFORNIA	62,820
5 T32AG00160-04	GREER, DAVID S INSTITUTIONAL NATIONAL RESEARCH SERVICE AWARD	09-30-90	09-29-91	BROWN UNIVERSITY	6,349
5 T32AG00161-04	EATON, WILLIAM W PSYCHIATRIC EPIDEMIOLOGY TRAINING GRANT	07-01-90	06-30-91	JOHNS HOPKINS UNIVERSITY	53,125
5 T32AG00162-03	HALLACE, ROBERT B TRAINING PROGRAM IN EPIDEMIOLOGY & BIOMETRY OF AGING	06-01-90	05-31-91	UNIVERSITY OF IOWA	74,330
5 T32AG00164-03	DEMENT, WILLIAM C RESEARCH TRAINING IN GERIATRIC SLEEP DISORDERS MEDICINE	04-01-90	03-31-91	STANFORD UNIVERSITY	140,176
5 T32AG00165-03	BOHMAN, BARBARA H TRAINING PROGRAM IN MOLECULAR BASIS OF AGING	04-01-90	03-31-91	UNIVERSITY OF TEXAS HLTH SCI CTR SAN ANT	64,746

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GRANT NUMBER	PRINCIPAL INVESTIGATOR TITLE	BUDGET START	DATES END	INSTITUTION	TOTAL			
5 T32AG00169-03	GERMAN, PEARL S GERONTOLOGY IN PUBLIC HEALTH	09-01-90	06-30-91	JOHNS HOPKINS UNIVERSITY	137,833			
5 T32AG00172-03	D FRANK BENSON, DEMENTIA AND BEHAVIORAL NEUROLOGY	09-15-90	06-30-91	UNIVERSITY OF CALIFORNIA LOS ANGELES	56,251			
5 T32AG00173-03	CLARK, ROBERT L DOCTORAL TRAINING IN ECONOMICS OF AGING	07-01-90	04-30-91	NORTH CAROLINA STATE UNIVERSITY RALEIGH	29,650			
5 T32AG00175-03	SMITH, ANDERSON D RESEARCH TRAINING IN COGNITIVE AGING	07-01-90	04-30-91	GEORGIA INSTITUTE OF TECHNOLOGY	65,983			
5 T32AG00177-02	PRESTON, SAMUEL H DEMOGRAPHY OF AGING	09-01-90	08-31-91	BOSTON UNIVERSITY	106,022			
1 T32AG00180-01A1	MILLER, RICHARD A RESEARCH TRAINING IN AGING AND CELL PROLIFERATION	01-01-90	12-31-90	BOSTON UNIVERSITY	55,638			
5 T32AG00181-02	KULLER, LEWIS H EPIDEMIOLOGY OF AGING	09-01-90	06-30-91	UNIVERSITY OF PITTSBURGH AT PITTSBURGH	146,727			
5 T32AG00182-02	ETTINGER, WALTER H GERONTOLOGY AND GERIATRIC MEDICINE	09-01-90	06-30-91	MAKES FOREST UNIVERSITY	191,212			
5 T32AG00183-02	MOSES, ROBB E CELL AND MOLECULAR BIOLOGY OF AGING	09-01-90	06-30-91	BAYLOR COLLEGE OF MEDICINE	82,674			
1 T32AG00184-01A1	HU, TEN-WEI ECONOMICS OF AGING AND HEALTH SERVICES	01-01-90	12-31-90	UNIVERSITY OF CALIFORNIA BERKELEY	103,371			
5 T32AG00185-02	HOYER, WILLIAM J AGING AND COGNITIVE-NEUROSCIENCE	09-01-90	08-31-91	SYRACUSE UNIVERSITY AT SYRACUSE	53,914			
5 T32AG00186-02	WISE, DAVID A ECONOMICS OF AGING-TRAINING PROGRAM	09-01-90	06-30-91	NATIONAL BUREAU OF ECONOMIC RESEARCH	67,979			
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GRANT NUMBER	PRINCIPAL INVESTIGATOR TITLE	BUDGET START	DATES END	INSTITUTION	TOTAL	
5 T32AG00187-02	PERLMUTTER, MARION COMPLEMENTARY TRAINING PROGRAM IN PSYCHOLOGY OF AGING	07-01-90	06-30-91	UNIVERSITY OF MICHIGAN AT ANN ARBOR	125,516	
1 T32AG00188-01A1	AUERBACH, ROBERT DEVELOPMENTAL BIOLOGY OF AGING	07-01-90	06-30-91	UNIVERSITY OF WISCONSIN MADISON	53,579	
1 T32AG00189-01A1	LIEM, RONALD K CELLULAR AND NEUROBIOLOGICAL ASPECTS OF AGING	01-01-90	12-31-90	COLUMBIA UNIVERSITY NEW YORK	112,312	
5 T32AG00192-02	BIRREN, JAMES E RESEARCH TRAINING IN MENTAL HEALTH AND AGING	12-01-89	11-30-90	UNIVERSITY OF SOUTHERN CALIFORNIA	70,060	
5 T32AG00194-02	HAHERMAN, DAVID AGING RESEARCH	09-01-90	06-30-91	YESHIVA UNIVERSITY	167,048	
5 T32AG00196-02	MEYER, EDWIN M NEUROBIOLOGY OF AGING	07-01-90	06-30-91	UNIVERSITY OF FLORIDA	68,002	
5 T32AG00197-06	KAHANA, EVA F RES TRAINING IN SOCIAL ASPECTS OF MENTAL HEALTH & AGING	09-01-90	06-30-91	CASE WESTERN RESERVE UNIVERSITY	75,758	
1 T32AG00198-01A1	MALETTA, GABE J BEHAVIORAL NEUROSCIENCE OF AGING	07-01-90	04-30-91	UNIVERSITY OF MINNESOTA OF MNPLS-ST PAUL	91,315	
1 T32AG00201-01	MAHESH, VIRENDRA B MOLECULAR ASPECTS OF ENDOCRINE CELL SENESECE	07-01-90	06-30-91	MEDICAL COLLEGE OF GEORGIA	29,780	
1 T32AG00204-01	WINGFIELD, ARTHUR COGNITIVE AGING IN A SOCIAL CONTEXT	07-01-90	04-30-91	BRANDEIS UNIVERSITY	64,858	
1 T32AG00205-01	YU, BYUNO P NUTRITIONAL GERONTOLOGY	07-01-90	04-30-91	UNIVERSITY OF TEXAS HLTH SCI CTR SAN ANT	148,500	
1 T32AG00208-01	HOGAN, DENNIS P POPULATION BIOLOGY, GENERATIONS, AND COHORT SUCCESSION	07-01-90	04-30-91	PENNSYLVANIA STATE UNIVERSITY-UNIV PARK	44,270	

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1 T32AG00209-01	RUSSELL, ROBERT M NUTRITION AND AGING	08-01-90	05-31-91	TUFTS UNIVERSITY	40,227
5 K08AG00260-05	MAHLER, MICHAEL E EVENT RELATED POTENTIALS--ALZHEIMER DISEASE	09-15-90	08-31-91	UNIVERSITY OF CALIFORNIA LOS ANGELES	58,505
5 K04AG00273-05	YELIN, EDWARD M FACTORS IN THE DECLINING FUNCTION OF THE AGING	12-01-89	11-30-90	UNIVERSITY OF CALIFORNIA SAN FRANCISCO	66,829
2 K12AG00294-06	MEI, JEANNE Y PHYSICIAN SCIENTIST PROGRAM AWARD	08-01-90	07-31-91	HARVARD UNIVERSITY	681,240
5 K04AG00300-06	MC NEILL, THOMAS H THE BASAL GANGLIA AND AGING	12-01-89	11-30-90	UNIVERSITY OF SOUTHERN CALIFORNIA	69,876
5 K07AG00301-06	KOHAL, JEROME GERIATRIC LEADERSHIP ACADEMIC AWARD	08-01-90	07-31-91	CASE WESTERN RESERVE UNIVERSITY	86,400
5 K07AG00302-05	COE, RODNEY M GERIATRIC LEADERSHIP ACADEMIC AWARD	08-01-90	07-31-91	ST. LOUIS UNIVERSITY	86,400
5 K07AG00305-06	HALTER, JEFFREY B GERIATRIC LEADERSHIP ACADEMIC AWARD	08-01-90	07-31-91	UNIVERSITY OF MICHIGAN AT ANN ARBOR	84,524
5 K04AG00309-06	DE PAOLO, LOUIS V EFFECTS OF AGING ON THE REGULATION OF FSH SECRETION	09-01-90	08-31-91	WHITTIER INSTITUTE FOR DIABETES & ENDOC	70,200
5 K08AG00312-05	GANGULI, MARY HIA ACADEMIC AWARD: PREDICTORS OF MORTALITY IN DEMENTIA	09-01-90	08-31-91	UNIVERSITY OF PITTSBURGH AT PITTSBURGH	61,992
"5 K04AG00313-05	HUI, SIU LUI "RCDA" LONGITUDINAL STUDIES OF BONE LOSS IN AGING	03-01-90	02-28-91	INDIANA UNIV-PURDUE UNIV AT INDIANAPOLIS	72,333
5 K08AG00314-05	MEADOR, KIMFORD J IN VIVO PROBE CENTRAL CHOLINERGIC SYSTEMS	09-01-90	08-31-91	MEDICAL COLLEGE OF GEORGIA	51,624

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5 R37AG00322-16	NEMETHY, GEORGE AGING--CONFORMATIONAL CHANGES OF COLLAGEN	07-01-90	06-30-91	MOUNT SINAI SCHOOL OF MEDICINE	124,621
5 K11AG00325-05	SOLSKY, MARILYN A CARTILAGE METABOLISM IN AGING AND OSTEOARTHRITIS	07-01-90	06-30-91	UNIVERSITY OF SOUTHERN CALIFORNIA	71,723
5 K04AG00327-05	SCHWARTZ, JANICE B THE EFFECT OF AGING ON CALCIUM BLOCKER KINETICS/DYNAMIC	01-01-90	12-31-90	UNIVERSITY OF CALIFORNIA SAN FRANCISCO	65,880
5 K11AG00329-06	MAGNUSSON, KATHY RUTH EXCITATORY AMINO ACIDS IN THE AGING BRAIN	06-01-90	05-31-91	COLORADO STATE UNIVERSITY	58,495
5 K04AG00336-05	MERRILL, GARY F TK REGULATION DURING AGING AND DEVELOPMENT	06-01-90	05-31-91	OREGON STATE UNIVERSITY	68,925
5 K08AG00341-04	SLOANE, PHILIP D DIZZINESS IN THE ELDERLY	08-01-90	07-31-91	UNIVERSITY OF NORTH CAROLINA CHAPEL HILL	54,484
5 K08AG00342-04	SIU, ALBERT L HEALTH POLICY AND FUNCTIONAL STATUS	07-01-90	06-30-91	UNIVERSITY OF CALIFORNIA LOS ANGELES	55,860
5 K04AG00344-05	EL-FAKAHAWY, ESAM E AGING AND MUSCARINIC RECEPTORS IN INTACT BRAIN CELLS	08-01-90	07-31-91	UNIVERSITY OF MARYLAND BALT PROF SCHOOL	67,500
5 K08AG00345-05	WANG, SAN YOU EFFECTS OF AGING AND INSULIN BIOSYNTHESIS	08-01-90	07-31-91	HARVARD UNIVERSITY	58,432
5 K08AG00347-05	COON, PATRICIA J GLUCOSE AND LIPID METABOLISM IN OBESITY	08-01-90	07-31-91	JOHNS HOPKINS UNIVERSITY	64,836
5 K08AG00350-03S1	GORELICK, PHILIP D NEUROEPIDEMIOLOGY OF MULTI-INFARCT DEMENTIA	08-01-89	03-31-91	MICHAEL REESE HOSP & MED CTR (CHICAGO)	37,612
5 K12AG00353-04	SEEGMILLER, JARVIS E PHYSICIAN SCIENTIST PROGRAM AWARD	07-01-90	06-30-91	UNIVERSITY OF CALIFORNIA SAN DIEGO	463,843

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GRANT NUMBER	PRINCIPAL INVESTIGATOR TITLE	BUDGET START	DATES END	INSTITUTION	TOTAL		
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5 K08AG00358-04	MEIER, DIANE E INFLUENCE OF AGE AND RACE ON BONE HEALTH	12-01-89	11-30-90	MOUNT SINAI SCHOOL OF MEDICINE	58,536		
2 K07AG00359-04	HAMERMAN, DAVID GERIATRIC LEADERSHIP ACADEMIC AWARD	02-01-90	11-30-90	MONTEFIORE MEDICAL CENTER (BRONX, NY)	69,732		
5 K08AG00363-04	LAVIZZO-MOUREY, RISA RISK FACTORS FOR DEHYDRATION AMONG THE ELDERLY	08-01-90	07-31-91	UNIVERSITY OF PENNSYLVANIA	63,072		
5 K08AG00367-04	LYLES, KENNETH W GLUCOCORTICOID EFFECTS ON MINERAL HOMEOSTASIS IN AGING	05-01-90	04-30-91	DUKE UNIVERSITY	56,277		
2 K07AG00368-04	LUCHI, ROBERT J GERIATRIC LEADERSHIP ACADEMIC AWARD	01-01-90	12-31-90	BAYLOR COLLEGE OF MEDICINE	72,622		
5 K04AG00369-04	JOHNSON, THOMAS E MOLECULAR GENETIC ANALYSIS OF THE SPECIFICATION OF AGING	08-01-90	07-31-91	UNIVERSITY OF COLORADO AT BOULDER	57,884		
5 K11AG00371-04	DOVE, S BRENT EFFECT OF AGING ON IMMUNOGENETICS OF SECRETORY IGA RESPO	02-01-90	01-31-91	UNIVERSITY OF TEXAS HLTH SCI CTR SAN ANT	67,905		
5 P30AG00371-17	COHEN, HARVEY J RESEARCH SUPPORT SERVICES FOR GERONTOLOGY CENTER	04-01-90	03-31-91	DUKE UNIVERSITY	363,000		
5 K04AG00374-04	THOMAS, MARILYN L INTERLEUKIN 2 SYNTHESIS AND ACTIVITY IN THE AGED	05-01-90	04-30-91	SCRIPPS CLINIC AND RESEARCH FOUNDATION	65,340		
7 P01AG00378-19	CRISTOFALO, VINCENT J CELLULAR SENESCENCE & THE CONTROL OF CELL	02-13-90	01-31-91	MEDICAL COLLEGE OF PENNSYLVANIA	820,478		
*5 K11AG00382-04	LYTTON, WILLIAM CONNECTIONIST MODELING IN THE NEUROLOGY OF AGING	09-01-90	08-31-91	SALK INSTITUTE FOR BIOLOGICAL STUDIES	80,608		
5 K08AG00383-04	BUSBY, MARY J PHYSICAL ACTIVITY & METABOLIC FUNCTION IN OLDER MEN	09-01-90	08-31-91	JOHNS HOPKINS UNIVERSITY	64,261		

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5 K08AG00387-04	MADER, SCOTT L POSTURAL HYPOTENSION, AUTONOMIC FUNCTION AND AGING	08-01-90	07-31-91	CASE WESTERN RESERVE UNIVERSITY	64,720
5 K01AG00390-05	CHEUNG, HOU T NUTRITION, AGING, AND IMMUNITY	01-01-90	12-31-90	ILLINOIS STATE UNIVERSITY	59,311
2 K01AG00394-04	VERBRUGGE, LOIS M ARTHRITIS & DAILY LIFE	09-01-90	08-31-91	UNIVERSITY OF MICHIGAN AT ANN ARBOR	73,959
5 K11AG00396-04	GROLLMAN, EDWIN M CYTOSKELETAL PROTEINS & TROPHIC FACTORS IN AGING	08-01-90	07-31-91	UNIVERSITY OF ROCHESTER	73,722
5 K01AG00399-03	DUTTA, PURABI EFFECTS OF AGE & RIBOFLAVIN ON B-ADRENERGIC ACTIVITIES	02-01-90	01-31-91	SLOAN-KETTERING INSTITUTE FOR CANCER RES	67,392
5 K07AG00404-03	SCOTT, ROBERT B GERIATRIC LEADERSHIP ACADEMIC AWARD	05-01-90	04-30-91	VIRGINIA COMMONWEALTH UNIVERSITY	86,480
5 K11AG00406-03	KANG, UN J NEUROTRANSMITTER GENE EXPRESSION IN AGING BRAIN	03-01-90	02-28-91	CORNELL UNIVERSITY MEDICAL CENTER	77,964
5 K08AG00407-03	BRASHEAR, HARRY R DIAGONAL BAND--ORGANIZATION AND CHANGES IN DEMENTIA	07-01-90	06-30-91	UNIVERSITY OF VIRGINIA CHARLOTTESVILLE	66,096
5 K08AG00408-03	BIERER, LINDA M CHOLINERGIC/NORADRENERGIC TREATMENT OF ALZHEIMER'S	07-09-90	06-30-91	MOUNT SINAI SCHOOL OF MEDICINE	59,846
7 K08AG00411-04	TENOVER, JOYCE S NIA ACADEMIC AWARD-ANDROGEN ACTION IN THE ELDERLY MALE	08-01-90	04-30-91	EMORY UNIVERSITY	43,670
5 K01AG00412-03	KELLEHER, JOANNE K MATHEMATICAL MODELS OF INTERMEDIARY METABOLISM IN AGING	07-01-90	06-30-91	GEORGE WASHINGTON UNIVERSITY	64,096
5 K07AG00413-03	CREDITOR, MORTON C GERIATRIC LEADERSHIP ACADEMIC AWARD	05-01-90	04-30-91	UNIVERSITY OF KANSAS COL HLTH SCI & HOSP	81,818

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GRANT NUMBER	PRINCIPAL INVESTIGATOR TITLE	BUDGET START	DATES END	INSTITUTION	TOTAL	
1 K01AG000414-01A2	VERDERY, ROY B MIA SERCA--NUTRITIONAL & METABOLIC FACTORS IN AGING	04-01-90	03-31-91	WAKE FOREST UNIVERSITY	61,776	
5 K04AG000415-03	PERRY, GEORGE AMYLOID PRECURSOR IN ALZHEIMER DISEASE	09-01-90	08-31-91	CASE WESTERN RESERVE UNIVERSITY	67,500	
5 K04AG000417-03	HOPKINS, PAUL B ORGANIC AND BIO-ORGANIC CHEMISTRY	07-01-90	06-30-91	UNIVERSITY OF WASHINGTON	65,340	
5 K01AG000420-03	DALES, CONNIE W VITAMIN D METABOLISM--FUNCTION OF KIDNEY DONOR/RECIPIENT	09-01-90	08-31-91	DUKE UNIVERSITY	63,654	
5 K07AG000421-03	ETTINGER, WALTER H GERIATRIC LEADERSHIP ACADEMIC AWARD	08-01-90	07-31-91	WAKE FOREST UNIVERSITY	86,160	
5 K04AG000422-03	BONDADA, SUBBARAO B LYMPHOCYTE ACTIVATION	08-01-90	07-31-91	UNIVERSITY OF KENTUCKY	51,736	
5 K04AG000423-03	SEALS, DOUGLAS R HYPERTENSION IN THE ELDERLY--EFFECTS OF EXERCISE	08-01-90	07-31-91	UNIVERSITY OF ARIZONA	51,106	
5 R01AG000424-28	WALFORD, ROY NUTRITIONAL AND IMMUNE INFLUENCES ON AGING	05-01-90	04-30-91	UNIVERSITY OF CALIFORNIA LOS ANGELES	239,698	
5 K11AG000425-03	DE LA MONTE, SUZANNE M CNS PLASTICITY & ALZHEIMER'S DISEASE--MOLECULAR STUDIES	08-01-90	07-31-91	MASSACHUSETTS GENERAL HOSPITAL	63,060	
5 R37AG000425-26	HOLLOSZY, JOHN O EXERCISE-INDUCED BIOCHEMICAL AND ANATOMIC ADAPTATIONS	07-01-90	06-30-91	WASHINGTON UNIVERSITY	203,932	
5 K08AG000426-03	ADES, PHILIP A EXERCISE CONDITIONING IN OLDER CORONARY PATIENTS	07-01-90	06-30-91	UNIVERSITY OF VERMONT & ST AGRIC COLLEGE	61,655	
5 K04AG000427-03	EFFROS, RITA B STUDIES ON SENESENCE IN HUMAN T LYMPHOCYTE CULTURES	09-01-90	08-31-91	UNIVERSITY OF CALIFORNIA LOS ANGELES	61,127	

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5 K08AG00428-02	TAFFET, GEORGE E MODULATION OF RELAXATION IN THE SENESCENT HEART	12-01-89	11-30-90	BAYLOR COLLEGE OF MEDICINE	61,969
5 K01AG00429-02	MC DONALD, ROGER B AGING, HIGH SUCROSE DIETS AND PANCREATIC FUNCTION	07-01-90	06-30-91	UNIVERSITY OF CALIFORNIA DAVIS	54,795
5 K08AG00430-02	TROY, CAROL M CALCIUM AND THE CYTOSKELETON IN ALZHEIMER'S	07-01-90	06-30-91	COLUMBIA UNIVERSITY NEW YORK	65,664
5 K04AG00431-02	BURGIO, KATHRYN L BEHAVIORAL VS. DRUG INTERVENTION--URINARY INCONTINENCE	07-01-90	06-30-91	UNIVERSITY OF PITTSBURGH AT PITTSBURGH	52,349
5 K11AG00432-02	SCHULZ, PAUL E CHOLINERGIC MODULATION OF HIPPOCAMPAL HOSY FIBER LTP	12-01-89	11-30-90	BAYLOR COLLEGE OF MEDICINE	69,811
5 K08AG00433-02	SUPIANO, MARK A SYMPATHETIC FUNCTION IN THE ELDERLY	03-01-90	02-28-91	UNIVERSITY OF MICHIGAN AT ANN ARBOR	58,104
5 K01AG00434-02	GARRARD, JUDITH DISCHARGE OF NURSING HOME ELDERLY TO THE COMMUNITY	12-01-89	11-30-90	UNIVERSITY OF MINNESOTA OF MNPLS-ST PAUL	64,800
5 K04AG00436-03	MEI, JEANNE Y EFFECT OF AGE ON CARDIOVASCULAR REFLEX FUNCTION	08-01-90	07-31-91	BETH ISRAEL HOSP (BOSTON)	64,260
1 K08AG00437-01A1	COLVIN, PERRY L, JR DIETARY ACCLIMATION	12-01-89	11-30-90	WAKE FOREST UNIVERSITY	58,968
5 K08AG00439-02	EARL, NANCY L GENETIC EPIDEMIOLOGY OF LATE ONSET ALZHEIMER'S DISEASE	05-01-90	04-30-91	DUKE UNIVERSITY	63,785
*5 K01AG00440-02	KING, ABBY C EXERCISE AND STRESS-RELATED RESPONSE IN OLDER ADULTS	07-01-90	06-30-91	STANFORD UNIVERSITY	65,635
5 K04AG00441-02	GERHARDT, GREG A AGE-INDUCED CHANGES IN MONOAMINE PRESYNAPTIC FUNCTION	04-01-90	03-31-91	UNIVERSITY OF COLORADO HLTH SCIENCES CTR	65,501

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GRANT NUMBER	PRINCIPAL INVESTIGATOR TITLE	BUDGET START	DATES END	INSTITUTION	TOTAL
5 R37AG000443-16	SCHIFFMAN, SUSAN S GUSTATORY AND OLFACTORY CHANGES WITH AGE	12-01-89	11-30-90	DUKE UNIVERSITY	172,656
5 K01AG000444-02	YARASHESKI, KEVIN E ANABOLIC EFFECTS OF WEIGHT TRAINING AND GROWTH HORMONE	09-01-90	08-31-91	MASHINGTON UNIVERSITY	58,050
5 K11AG000445-02	HOLTZMAN, DAVID M TRISOMY 16 AND HOF--EFFECTS ON CNS GENE EXPRESSION	07-01-90	06-30-91	UNIVERSITY OF CALIFORNIA SAN FRANCISCO	72,224
5 K08AG000446-02	HULETTE, CHRISTINE M BRAIN REACTIVE AUTOANTIBODIES--ALZHEIMER'S DISEASE	08-01-90	07-31-91	DUKE UNIVERSITY	63,677
5 K04AG000450-02	LAKOSKI, JOAN M AGING AND ESTROGEN ON BIOGENIC AMINE PHYSIOLOGY-RCDA	09-01-90	08-31-91	UNIVERSITY OF TEXAS MEDICAL BRANCH	68,310
1 K11AG000452-01	DONALDSON, DEIRDRE H MOLECULAR BIOLOGY OF NEURODEGENERATIVE DISEASES	01-01-90	12-31-90	UNIVERSITY OF COLORADO HLTH SCIENCES CTR	73,865
1 K08AG000453-01	BOULT, CHARLES E PREDICTORS OF FUNCTIONAL ABILITY	09-01-90	08-31-91	UNIVERSITY OF MINNESOTA OF MNPLS-ST PAUL	61,992
1 K11AG000454-01	NORTON, PEGGY A CONNECTIVE TISSUE AND ETIOLOGY OF GENITOURINARY PROLAPSE	04-01-90	03-31-91	UNIVERSITY OF UTAH	72,781
1 K08AG000455-01	DAVIS, KENNETH M PHYSIOLOGY OF VOLUME REGULATION	07-01-90	06-30-91	HARVARD UNIVERSITY	58,104
1 K07AG000461-01	CASSEL, CHRISTINE K GERIATRIC LEADERSHIP ACADEMIC AWARD	12-01-89	11-30-90	UNIVERSITY OF CHICAGO	69,998
1 K07AG000469-01	MASORO, EDWARD J GERIATRIC LEADERSHIP ACADEMIC AWARD	04-01-90	03-31-91	UNIVERSITY OF TEXAS HLTH SCI CTR SAN ANT	86,400
5 K08AG000471-02	MANDELBLATT, JEANNE S BREAST AND CERVIX CANCER CONTROL IN THE ELDERLY	07-01-90	06-30-91	MEMORIAL HOSPITAL FOR CANCER & ALLIED DI	63,315

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GRANT NUMBER	PRINCIPAL INVESTIGATOR TITLE	BUDGET START	DATES END	INSTITUTION	TOTAL
1 K07AG000474-01	POTTER, JANE F GERIATRIC LEADERSHIP ACADEMIC AWARD	04-01-90	03-31-91	UNIVERSITY OF NEBRASKA MEDICAL CENTER	85,360
1 K07AG000485-01	ERSHLER, WILLIAM B GERIATRIC LEADERSHIP ACADEMIC AWARD	07-01-90	06-30-91	UNIVERSITY OF WISCONSIN MADISON	80,005
1 K11AG000486-01	JONAS, ELIZABETH A MODULATION OF CA CURRENT IN APLYSIA BAG CELL NEURONS	08-01-90	07-31-91	YALE UNIVERSITY	81,068
1 K08AG000487-01	STINEMAN, MARGARET O GERIATRIC-REHABILITATION PROGNOSTIC STAGING SYSTEM	07-01-90	06-30-91	UNIVERSITY OF PENNSYLVANIA	66,686
1 K12AG000489-01	SOLOMON, DAVID H GERIATRIC ACADEMIC PROGRAM AWARD	09-01-90	08-31-91	UNIVERSITY OF CALIFORNIA LOS ANGELES	171,989
1 K01AG000491-01	BURGIO, LOUIS D URINARY INCONTINENCE IN THE NURSING HOME	07-01-90	06-30-91	UNIVERSITY OF PITTSBURGH AT PITTSBURGH	69,594
1 K04AG000492-01	SCHWARTZ, LAWRENCE M MOLECULAR ANALYSIS OF CELL DEATH GENES	09-01-90	08-31-91	UNIVERSITY OF MASSACHUSETTS AMHERST	68,612
1 K08AG000494-01	PRATLEY, RICHARD E METABOLIC FUNCTION IN ELDERLY HYPERTENSIVES	07-09-90	06-30-91	JOHNS HOPKINS UNIVERSITY	64,584
1 K08AG000495-01	WEISS, JOHN H CHRONIC NEUROTOXICITY OF BMAA AND NON NMDA AGONISTS	07-01-90	06-30-91	STANFORD UNIVERSITY	66,174
1 K08AG000497-01	KATZEL, LESLIE I DYSLIPOPROTEINEMIA IN OLDER MEN WITH SILENT ISCHEMIA	07-01-90	06-30-91	JOHNS HOPKINS UNIVERSITY	64,584
-2 P01AG000538-14	COTMAN, CARL W BEHAVIORAL & NEURAL PLASTICITY IN THE AGED	09-01-90	06-30-91	UNIVERSITY OF CALIFORNIA IRVINE	581,633
5 P01AG000541-14	WEKSLER, MARC E IMMUNOBIOLOGY OF AGING	05-03-90	04-30-91	CORNELL UNIVERSITY MEDICAL CENTER	414,687

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5 R01AG00594-17	HARRISON, DAVID E DECLINE OF IMMUNE RESPONSE WITH AGE	07-01-90	06-30-91	JACKSON LABORATORY	185,208
5 P01AG00599-14	MINAKER, KENNETH L PROGRAM PROJECT IN BIOMEDICAL ASPECTS OF AGING	07-01-90	12-31-91	BETH ISRAEL HOSP (BOSTON)	1,235,355
5 R01AG00677-13	RUTHERFORD, CHARLES L ALTERNATE PATHWAYS IN CELLULAR AGING	04-01-90	03-31-91	VIRGINIA POLYTECHNIC INST AND ST UNIV	157,110
5 R01AG00947-13	STEIN, GRETCHEN H GROWTH REGULATION: SENESCENT VS. NONSENESCENT CELLS	06-01-90	05-31-91	UNIVERSITY OF COLORADO AT BOULDER	210,346
5 R01AG01121-11	COLEMAN, PAUL D COMPUTER AIDED STUDY OF DENDRITES IN AGING HUMAN BRAIN	04-01-90	03-31-91	UNIVERSITY OF ROCHESTER	146,093
5 R37AG01136-13	YEM, SHU-HUI C AGING BRAIN--IMMUNOHISTOLOGY AND BIOCHEMISTRY	07-01-90	06-30-91	YESHIVA UNIVERSITY	224,075
5 R01AG01159-14	MANTON, KENNETH G A DEMOGRAPHIC STUDY OF MULTIPLE CAUSES OF DEATH	12-01-89	11-30-90	DUKE UNIVERSITY	147,863
5 P01AG01188-12	MASORO, EDWARD J NUTRITIONAL PROBE OF THE AGING PROCESS	06-01-90	05-31-91	UNIVERSITY OF TEXAS HLTH SCI CTR SAN ANT	942,531
5 R37AG01228-12	WRIGHT, WOODRING E GENE EXPRESSION IN AGING AND DEVELOPMENT	12-01-89	11-30-90	UNIVERSITY OF TEXAS SW MED CTR/DALLAS	165,352
5 R37AG01228-12S1	WRIGHT, WOODRING E GENE EXPRESSION IN AGING AND DEVELOPMENT	01-02-90	11-30-90	UNIVERSITY OF TEXAS SW MED CTR/DALLAS	52,361
5 R37AG01274-12	GRACY, ROBERT W MOLECULAR BASIS FOR ABNORMAL PROTEINS IN AGING CELLS	02-01-90	01-31-91	TEXAS COLLEGE OF OSTEOPATHIC MEDICINE	176,578
5 R01AG01395-12	WILKINSON, GRANT R EFFECTS OF AGING PROCESS ON DRUG RESPONSIVENESS IN MAN	04-01-90	03-31-91	VANDERBILT UNIVERSITY	263,083

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GRANT NUMBER	PRINCIPAL INVESTIGATOR TITLE	BUDGET START	DATES END	INSTITUTION	TOTAL		
11-30-90							
5 R37AG01437-10	DAVIDSON, JULIAN M PHARMACOLOGIC FACTORS & SEXUALITY IN AGING HYPERTENSION	07-01-90	06-30-91	STANFORD UNIVERSITY	231,885		
5 R01AG01512-09	LU, JOHN K HORMONE SECRETION AND RECEPTOR PATTERNS DURING AGING	07-01-90	06-30-91	UNIVERSITY OF CALIFORNIA LOS ANGELES	139,841		
5 R01AG01739-10	MAHAFFEY, JAMES M GENETIC CONTROL OF CATALASE EXPRESSION IN DROSOPHILA	07-01-90	06-30-91	NORTH CAROLINA STATE UNIVERSITY RALEIGH	122,826		
5 P01AG01743-11	KLINMAN, NORMAN R IMMUNOBIOLOGY AND IMMUNOPATHOLOGY OF AGING	02-01-90	01-31-91	SCRIPPS CLINIC AND RESEARCH FOUNDATION	578,157		
5 P01AG01743-11S1	KLINMAN, NORMAN R IMMUNOBIOLOGY AND IMMUNOPATHOLOGY OF AGING	05-01-90	01-31-91	SCRIPPS CLINIC AND RESEARCH FOUNDATION	165,450		
5 P01AG01751-12	MARTIN, GEORGE M GENE ACTION IN THE PATHOBIOLOGY OF AGING	08-01-90	07-31-91	UNIVERSITY OF WASHINGTON	1,424,817		
5 R01AG01760-10	KLAG, MICHAEL J PRECURSORS OF PREMATURE DISEASE AND DEATH	03-01-90	02-28-91	JOHNS HOPKINS UNIVERSITY	237,200		
2 R01AG01822-11	SHEARN, ALLEN D ROLE OF SPECIFIC GENES IN IMAGINAL DISC DETERMINATION	04-01-90	03-31-91	JOHNS HOPKINS UNIVERSITY	160,490		
5 R01AG02021-10	SIMPkins, JAMES M CATECHOLAMINES AND REPRODUCTIVE AGING	09-01-90	08-31-91	UNIVERSITY OF FLORIDA	126,356		
5 R37AG02049-11	GARRY, PHILIP J A PROSPECTIVE STUDY OF NUTRITION IN THE ELDERLY	01-01-90	12-31-90	UNIVERSITY OF NEW MEXICO ALBUQUERQUE	264,053		
*5 P01AG02126-10	MAROTTA, CHARLES A PROGRAM PROJECT: MOLECULAR BIOLOGY OF NEURONAL AGING	12-01-89	11-30-90	MC LEAN HOSPITAL (BELMONT, MA)	717,391		
5 R01AG02128-10	FESSLER, JOHN H BASEMENT MEMBRANE BIOSYNTHESIS	05-01-90	04-30-91	UNIVERSITY OF CALIFORNIA LOS ANGELES	289,625		

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GRANT NUMBER	PRINCIPAL INVESTIGATOR TITLE	BUDGET START	DATES END	INSTITUTION	TOTAL			
5 P01A002132-10	PRUSTNER, STANLEY B DEGENERATIVE & DEMENTING DISEASES OF AGING	01-01-90	12-31-90	UNIVERSITY OF CALIFORNIA SAN FRANCISCO	1,236,727			
2 R01A002152-09	STUTMAN, OSIAS T-CELL DEVELOPMENT AND AGING	04-01-90	03-31-91	SLOAN-KETTERING INSTITUTE FOR CANCER RES	163,104			
5 R01A002205-11	MALEMUD, CHARLES J BEHAVIOR OF HUMAN CARTILAGE IN AGING AND OSTEOARTHRITIS	04-01-90	05-31-91	CASE WESTERN RESERVE UNIVERSITY	177,353			
5 P01A002219-10	MOHS, RICHARD C CHOLINERGIC TREATMENT OF MEMORY DEFICITS IN THE AGED	04-03-90	03-31-91	MOUNT SINAI SCHOOL OF MEDICINE	714,682			
5 R37A002224-11	WISE, PHYLLIS M NEUROENDOCRINE AND NEUROCHEMICAL FUNCTION DURING AGING	07-01-90	04-30-91	UNIVERSITY OF MARYLAND BALT PROF SCHOOL	217,901			
5 R01A002246-11	TEMPLETON, ALAN R AGING EFFECTS ASSOCIATED WITH A POLYGENIC COMPLEX	04-01-90	03-31-91	WASHINGTON UNIVERSITY	91,495			
5 R01A002287-10	BOSSE, RAYMOND THE EFFECT OF RETIREMENT ON PHYSICAL HEALTH	05-01-90	04-30-91	HELLENIC COLLEGE	108,103			
5 R01A002325-09	LEES, SIDNEY MECHANISMS OF BONE IN AGING	12-01-89	11-30-90	FORSYTH DENTAL CENTER	202,611			
2 R01A002329-14	YUNIS, EDMOND J IMMUNOLOGICAL ASPECTS OF AGING	04-01-90	03-31-91	DANA-FARBER CANCER INSTITUTE	146,598			
5 R01A002331-10	CLEMMONS, DAVYD R CONTROL OF FIBROBLAST REPLICATION BY IGF-I	08-01-90	07-31-91	UNIVERSITY OF NORTH CAROLINA CHAPEL HILL	211,473			
5 R01A002338-08	O'LEARY, JAMES J MECHANISMS OF DEPRESSED IMMUNE FUNCTION IN AGING MAN	04-01-90	03-31-91	UNIVERSITY OF MINNESOTA OF MNPLS-ST PAUL	142,770			
5 R37A002452-11	LIGHT, LEAH L DIRECT AND INDIRECT MEASURES OF MEMORY IN OLD AGE	09-01-90	08-31-91	PITZER COLLEGE	119,819			
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GRANT NUMBER	PRINCIPAL INVESTIGATOR TITLE	BUDGET START	DATES END	INSTITUTION	TOTAL
5 R01AG02467-09	KUSHNER, IRVING INDUCTION OF ACUTE PHASE PROTEIN BIOSYNTHESIS	03-01-90	02-28-91	CASE WESTERN RESERVE UNIVERSITY	144,292
5 R37AG02577-08	NIMNI, MARCEL E OSTEOGENESIS: DEVELOPMENT, MODULATION, AND AGING	12-01-89	11-30-90	UNIVERSITY OF SOUTHERN CALIFORNIA	134,372
2 R01AG02711-12	ANCOLI-ISRAEL, SONIA PREVALENCE OF SLEEP APNEA IN AN AGED POPULATION	04-01-90	03-31-91	UNIVERSITY OF CALIFORNIA SAN DIEGO	104,373
5 R37AG02751-09	HOWARD, DARLENE V STUDIES OF AGING, SEMANTIC PROCESSING, AND MEMORY	05-01-90	04-30-91	GEORGETOWN UNIVERSITY	62,843
5 R01AG02302-09	MAYEUX, RICHARD P BEHAVIORAL/BIOCHEMICAL CORRELATES IN DISEASES OF AGING	09-15-90	06-30-91	COLUMBIA UNIVERSITY NEW YORK	173,196
5 R01AG02822-10	STOCKDALE, FRANK E DEVELOPMENTAL AGE AND CHANGES IN MYOSIN ISOZYMES	04-01-90	03-31-91	STANFORD UNIVERSITY	239,037
5 R01AG02832-09	STROMMAN, RICHARD C MUSCLE MATURATION: GROWTH FACTORS AND AGING	12-01-89	11-30-91	UNIVERSITY OF CALIFORNIA BERKELEY	131,692
5 P01AG02908-10	LEHMAN, I R DNA TRANSACTIONS AND AGING	08-01-90	07-31-91	STANFORD UNIVERSITY	1,016,557
5 P01AG02921-09	CAPLAN, ARNOLD I EXTRACELLULAR MATRIX AND AGING	08-01-90	07-31-91	CASE WESTERN RESERVE UNIVERSITY	807,011
5 R01AG03051-07	REISBERG, BARRY AGING AND DEMENTIA: LONGITUDINAL COURSE OF SUBGROUPS	07-01-88	06-30-91	NEW YORK UNIVERSITY	296,843
2 R37AG03055-09	ELIAS, MERRILL F AGE HYPERTENSION AND INTELLECTIVE PERFORMANCE	07-02-90	06-30-91	UNIVERSITY OF MAINE	222,415
5 P01AG03104-09	EGER, EDMOND I PROGRAM PROJECT - AGING AND ANESTHESIA	03-07-90	02-28-91	UNIVERSITY OF CALIFORNIA SAN FRANCISCO	496,323

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GRANT NUMBER	PRINCIPAL INVESTIGATOR TITLE	BUDGET START	DATES END	INSTITUTION	TOTAL		
5 P01A003106-08	MANUELIDIS, LAURA ANIMAL MODELS FOR THE STUDY OF DEMENTIAS AND AGING	12-01-89	11-30-90	YALE UNIVERSITY	632,842		
3 P01A003106-08S1	MANUELIDIS, LAURA ANIMAL MODELS FOR THE STUDY OF DEMENTIAS AND AGING	09-01-90	11-30-90	YALE UNIVERSITY	50,408		
2 R01A003111-09A1	MC KINLAY, SONJA M EPIDEMIOLOGY OF MENOPAUSE	01-01-90	12-31-90	NEW ENGLAND RESEARCH INSTITUTE, INC.	194,438		
5 R37A003188-09	MOODBURY, MAX A LONGITUDINAL MODELS OF CORRELATES OF AGING AND LONGEVITY	06-01-90	05-31-91	DUKE UNIVERSITY	132,615		
7 R01A003376-10	BARNES, CAROL A NEUROBEHAVIORAL RELATIONS IN SENESCENT HIPPOCAMPUS	09-05-90	04-30-91	UNIVERSITY OF ARIZONA	127,143		
5 R01A003382-07	EBERSOLE, JEFFREY L EFFECT OF AGING ON SECRETORY IGA IMMUNE SYSTEM	09-01-90	08-31-91	UNIVERSITY OF TEXAS HLTH SCI CTR SAN ANT	130,973		
5 R01A003393-09	ALLEN, RONALD E CHANGES IN SKELETAL MUSCLE SATELLITE CELLS DURING AGING	05-01-90	04-30-91	UNIVERSITY OF ARIZONA	86,485		
5 R01A003417-10	FERNANDES, GABRIEL INFLUENCE OF DIET ON REGULATION, AUTOIMMUNITY, AND AGING	07-01-90	06-30-91	UNIVERSITY OF TEXAS HLTH SCI CTR SAN ANT	161,698		
2 R37A003501-09	LEVINTHAL, HOWARD SYMPTOM & EMOTION STIMULI TO HEALTH ACTION IN THE ELDERL	09-01-90	06-30-91	RUTGERS THE STATE UNIV NEW BRUNSWICK	430,714		
5 P01A003644-06	HAMILL, ROBERT W NEUROPLASTICITY IN AGING AND DEMENTIA	04-01-90	12-31-90	UNIVERSITY OF ROCHESTER	813,294		
"5 R01A003763-06	WHISLER, RONALD L CELLULAR MECHANISMS OF HUMAN IMMUNOSENESECE	03-01-90	02-28-91	OHIO STATE UNIVERSITY	132,327		
5 R01A003824-06	HIBBARD, JUDITH H FEMALE EMPLOYMENT PATTERNS, LIFE STAGE AND HEALTH STATUS	03-01-90	02-28-91	KAISER FOUNDATION RESEARCH INSTITUTE	82,966		

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GRANT NUMBER	PRINCIPAL INVESTIGATOR TITLE	BUDGET START	DATES END	INSTITUTION	TOTAL
5 P01A004393-06	HARREN, JOHN M COMPLICATIONS OF LONG-TERM URINARY CATHETERS IN AGED	12-01-89	11-30-90	UNIVERSITY OF MARYLAND BALT PROF SCHOOL	751,530
5 P01A004402-08	SHAPIRO, JAY ACADEMIC NURSING HOME	09-01-90	06-30-91	JOHNS HOPKINS UNIVERSITY	723,532
5 P01A004418-07	HOFFER, BARRY J PHARMACOLOGICAL SUBSTRATES IN AGING	03-01-90	08-31-91	UNIVERSITY OF COLORADO HLTH SCIENCES CTR	477,869
5 R37A004517-07	WINGFIELD, ARTHUR AGE AND DECISION STRATEGIES IN RUNNING MEMORY FOR SPEECH	04-01-90	03-31-91	BRANDEIS UNIVERSITY	98,739
7 R01A004518-07	HUI, SIU LUI LONGITUDINAL STUDIES OF BONE LOSS IN AGING	02-01-90	01-31-91	INDIANA UNIV-PURDUE UNIV AT INDIANAPOLIS	52,159
5 P30A004590-06	CLUBB, JEROME M FACTORS IN AGING: CONTINUED DEVELOPMENT OF RESEARCH RESO	12-05-89	11-30-90	UNIVERSITY OF MICHIGAN AT ANN ARBOR	603,180
2 R01A004594-07	STANSKI, DONALD R IV ANESTHETIC DISPOSITION IN THE AGED HEMODYNAMIC STATE	07-01-90	06-30-91	STANFORD UNIVERSITY	178,910
5 R01A004736-07	THONAR, EUGENE J AGE-RELATED DIFFERENCES IN CARTILAGE PROTEOGLYCAN	04-01-90	03-31-91	RUSH-PRESBYTERIAN-ST LUKES MEDICAL CTR	146,803
5 R37A004791-07	WEBER, ROBERT D SEMANTIC MEMORY IN ALZHEIMER'S DISEASE	04-01-90	03-31-91	UNIVERSITY OF PITTSBURGH AT PITTSBURGH	91,284
5 R37A004810-07	LU, JOHN K HORMONE SECRETION AND PREGNANCY DURING AGING	04-01-90	03-31-91	UNIVERSITY OF CALIFORNIA LOS ANGELES	124,845
5 R37A004810-0751	LU, JOHN K HORMONE SECRETION AND PREGNANCY DURING AGING	04-01-90	03-31-91	UNIVERSITY OF CALIFORNIA LOS ANGELES	10,474
5 R01A004821-08	OZER, HARVEY L IMMORTALIZATION OF SV40-TRANSFORMED HUMAN CELLS	09-01-90	08-31-91	UNIVERSITY OF MEDICINE & DENTISTRY OF NJ	278,030

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GRANT NUMBER	PRINCIPAL INVESTIGATOR TITLE	BUDGET START	DATES END	INSTITUTION	TOTAL
5 P01A004860-07	THORBECKE, GEERTRUIDA J EFFECT OF AGING ON THE IMMUNE RESPONSE	08-01-90	07-31-91	NEW YORK UNIVERSITY	658,553
5 P01A004861-05	LEVINE, ELLIOT M STUDIES OF HUMAN ENDOTHELIAL CELLS OF DIVERSE ORIGIN	12-01-89	11-30-91	MISTAR INSTITUTE OF ANATOMY AND BIOLOGY	763,046
5 P01A004875-07	RIGGS, BYRON L PHYSIOLOGY OF BONE METABOLISM IN AN AGING POPULATION	09-01-90	06-30-91	MAYO FOUNDATION	807,687
5 R01A004895-05	ECKERT, J KEVIN CAREGIVERS TO AT-RISK ELDERLY BOARD/CARE HOME RESIDENTS	04-01-90	03-31-91	UNIVERSITY OF MARYLAND BALT CO CAMPUS	234,786
5 R01A004924-05	ZAUTRA, ALEX J LIFE EVENTS AND DEMORALIZATION IN THE ELDERLY	09-01-90	06-30-91	ARIZONA STATE UNIVERSITY	89,987
5 R01A004932-06	SMITH, JAMES C THE AGE-RELATED EFFECT OF THE SHEET TASTE IN THE RAT	04-01-90	03-31-91	FLORIDA STATE UNIVERSITY	81,975
5 P01A004953-07	ALBERT, MARILYN S AGE-RELATED CHANGES OF COGNITION IN HEALTH & DISEASE	08-01-90	05-31-91	MASSACHUSETTS GENERAL HOSPITAL	589,011
5 R01A004954-07	EAVES, LINDON J GENETIC MODELS OF DEVELOPMENT AND AGING	07-01-90	06-30-91	VIRGINIA COMMONWEALTH UNIVERSITY	150,623
5 R01A004970-03	HOBMAN, ERIC J EARLY URINE B12 DEFICIENCY DETECTION IN ELDERLY	04-01-90	03-31-91	UNIVERSITY OF CINCINNATI	152,928
5 R01A004980-2852	THORBECKE, GEERTRUIDA J LYMPHOID CELLS PRODUCTION OF ANTIBODIES	04-01-88	02-28-91	NEW YORK UNIVERSITY	48,066
5 R01A004984-05	RIKANS, LORA E INFLUENCE OF AGING ON HEPATOXICITY	09-01-90	08-31-91	UNIVERSITY OF OKLAHOMA HLTH SCIENCES CTR	89,839
2 R01A005107-07	CRIMMINS, EILEEN M DOES IMPROVEMENT IN MORTALITY MEAN BETTER HEALTH?	08-01-90	07-31-91	UNIVERSITY OF SOUTHERN CALIFORNIA	116,633

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5 P01AG04860-07	THORBECKE, GEERTRUIDA J EFFECT OF AGING ON THE IMMUNE RESPONSE	08-01-90	07-31-91	NEW YORK UNIVERSITY	658,553
5 P01AG04861-05	LEVINE, ELLIOT M STUDIES OF HUMAN ENDOTHELIAL CELLS OF DIVERSE ORIGIN	12-01-89	11-30-91	WISLAR INSTITUTE OF ANATOMY AND BIOLOGY	763,046
5 P01AG04875-07	RIGGS, BYRON L PHYSIOLOGY OF BONE METABOLISM IN AN AGING POPULATION	09-01-90	06-30-91	MAYO FOUNDATION	807,687
5 R01AG04895-05	ECKERT, J KEVIN CAREGIVERS TO AT-RISK ELDERLY BOARD/CARE HOME RESIDENTS	04-01-90	03-31-91	UNIVERSITY OF MARYLAND BALT CO CAMPUS	234,786
5 R01AG04924-05	ZAUTRA, ALEX J LIFE EVENTS AND DEMORALIZATION IN THE ELDERLY	09-01-90	06-30-91	ARIZONA STATE UNIVERSITY	89,987
5 R01AG04932-06	SMITH, JAMES C THE AGE-RELATED EFFECT OF THE SHEET TASTE IN THE RAT	04-01-90	03-31-91	FLORIDA STATE UNIVERSITY	81,975
5 P01AG04953-07	ALBERT, MARILYN S AGE-RELATED CHANGES OF COGNITION IN HEALTH & DISEASE	08-01-90	05-31-91	MASSACHUSETTS GENERAL HOSPITAL	589,011
5 R01AG04954-07	EAVES, LINDON J GENETIC MODELS OF DEVELOPMENT AND AGING	07-01-90	06-30-91	VIRGINIA COMMONWEALTH UNIVERSITY	150,623
5 R01AG04970-03	NORMAN, ERIC J EARLY URINE B12 DEFICIENCY DETECTION IN ELDERLY	04-01-90	03-31-91	UNIVERSITY OF CINCINNATI	152,928
5 R01AG04980-2852	THORBECKE, GEERTRUIDA J LYMPHOID CELLS PRODUCTION OF ANTIBODIES	04-01-88	02-28-91	NEW YORK UNIVERSITY	48,064
5 R01AG04984-05	RIKANS, LORA E INFLUENCE OF AGING ON HEPATOTOXICITY	09-01-90	08-31-91	UNIVERSITY OF OKLAHOMA HLTH SCIENCES CTR	89,839
2 R01AG05107-07	CRIMMINS, EILEEN M DOES IMPROVEMENT IN MORTALITY MEAN BETTER HEALTH?	08-01-90	07-31-91	UNIVERSITY OF SOUTHERN CALIFORNIA	116,633

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11-30-90	GRANT NUMBER	PRINCIPAL INVESTIGATOR TITLE	BUDGET START	DATES END	INSTITUTION	TOTAL	
	5 R01AG05110-05	HADDEN, DAVID J ADULT AGE DIFFERENCES IN COMPONENT PROCESSES OF READING	12-01-89	11-30-90	DUKE UNIVERSITY	149,241	
	5 P01AG05119-06	MARKESBERY, WILLIAM R BIOCHEMICAL, MORPHOLOGICAL, AND TRACE ELEMENT STUDIES	05-01-90	04-30-91	UNIVERSITY OF KENTUCKY	510,378	
	2 P50AG005128-07	ROSES, ALLEN D ALZHEIMER'S DISEASE RESEARCH CENTER	08-01-90	04-30-91	DUKE UNIVERSITY	1,546,074	
	5 P50AG005131-07	KATZMAN, ROBERT ALZHEIMER'S DISEASE RESEARCH CENTER	07-01-90	03-31-91	UNIVERSITY OF CALIFORNIA SAN DIEGO	1,663,667	
	3 P50AG005131-07S1	KATZMAN, ROBERT ALZHEIMER'S DISEASE RESEARCH CENTER	08-17-90	03-31-91	UNIVERSITY OF CALIFORNIA SAN DIEGO	258,843	
	3 P50AG005131-07S2	KATZMAN, ROBERT ADRC SATELLITE IN IMPERIAL COUNTY	09-01-90	03-31-91	UNIVERSITY OF CALIFORNIA SAN DIEGO	217,592	
	2 P50AG005133-07	PETTEGREN, JAY W ALZHEIMER DISEASE RESEARCH CENTER	08-01-90	04-30-91	UNIVERSITY OF PITTSBURGH AT PITTSBURGH	982,738	
	5 P50AG005134-07	GROHDMAN, JOHN H ALZHEIMER'S DISEASE RESEARCH CENTER	07-01-90	03-31-91	HARVARD UNIVERSITY	1,083,962	
	3 P50AG005134-07S1	GROHDMAN, JOHN H ALZHEIMER'S DISEASE RESEARCH CENTER	08-01-90	03-31-91	HARVARD UNIVERSITY	64,879	
	2 P50AG005136-07	MARTIN, GEORGE M ALLZHEIMER'S DISEASE RESEARCH CENTER	08-01-90	04-30-91	UNIVERSITY OF WASHINGTON	1,579,923	
	5 P50AG005138-07	DAVIS, KENNETH L ALZHEIMER'S DISEASE RESEARCH CENTER	07-01-90	03-31-91	MOUNT SINAI SCHOOL OF MEDICINE	1,045,798	
	5 P50AG005142-07	FINCH, CALEB E ALZHEIMER'S DISEASE RESEARCH CENTER	07-01-90	03-31-91	UNIVERSITY OF SOUTHERN CALIFORNIA	1,585,618	

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3 P50AG005142-0751	FINCH, CALEB E ADRC-CALIFORNIA STATE UNIV. AT LOS ANGELES SATELLITE	09-01-90	03-31-91	UNIVERSITY OF SOUTHERN CALIFORNIA	166,260
2 P50AG005144-07	MARKESBERY, WILLIAM R ALZHEIMER'S DISEASE RESEARCH CENTER	08-01-90	04-30-91	UNIVERSITY OF KENTUCKY	796,455
5 P50AG005146-08	PRICE, DONALD L AGING, ALZHEIMER'S DISEASE, AND DOWN'S SYNDROME	07-02-90	03-31-91	JOHNS HOPKINS UNIVERSITY	1,688,113
2 U01AG005170-06A2	FANTL, JOHN A URINARY INCONTINENCE IN COMMUNITY-DWELLING WOMEN	07-01-90	06-30-91	VIRGINIA COMMONWEALTH UNIVERSITY	647,708
5 R01AG005188-02	BARKER, WILLIAM M MORTALITY DECLINE AMONG THE AGED--EXPLANATORY FACTORS	07-01-90	06-30-91	KAISER FOUNDATION RESEARCH INSTITUTE	198,601
5 R01AG005213-05	FRIEDMAN, DAVID EFFECTS OF AGING ON COGNITIVE ERP/CARDIAC WAVE EFFECT	05-01-90	04-30-91	NEW YORK STATE PSYCHIATRIC INSTITUTE	122,304
5 R01AG005214-06	ELLIS, JOHN RESPONSES OF SUBPOPULATIONS OF MUSCARINIC RECEPTORS	07-01-90	06-30-91	UNIVERSITY OF VERMONT & ST AGRIC COLLEGE	127,996
5 R01AG005223-05	HARREN, WILLIAM H, JR VISUAL CONTROL OF LOCOMOTION	09-01-90	08-31-91	BROWN UNIVERSITY	123,144
5 R01AG005233-03	FREEDMAN, ROBERT R BEHAVIORAL TREATMENT OF MENOPAUSAL HOT FLASHES	04-01-90	03-31-91	WAYNE STATE UNIVERSITY	114,144
7 U01AG005270-07	SCHNELLE, JOHN F BEHAVIOR MANAGEMENT OF URINARY INCONTINENCE	08-16-90	02-28-91	UNIVERSITY OF CALIFORNIA LOS ANGELES	131,853
"5 R37AG005284-05	DAVIS, MARADEE A LIVING ARRANGEMENTS, DIET & SURVIVAL OF OLDER US ADULTS	02-01-90	01-31-91	UNIVERSITY OF CALIFORNIA SAN FRANCISCO	232,642
2 R01AG005309-04A2	EFFROS, RITA B STUDIES ON SENESCENCE IN HUMAN T LYMPHOCYTE CULTURES	01-01-90	12-31-90	UNIVERSITY OF CALIFORNIA LOS ANGELES	74,916

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5 R01AG005324-06	REISER, KAREN M AGE-ASSOCIATED CHANGES IN COLLAGEN	05-01-90	04-30-91	UNIVERSITY OF CALIFORNIA DAVIS	109,829
5 R01AG005333-06	PEREIRA-SMITH, OLIVIA M MOLECULAR AND CYTOGENETIC STUDIES OF HUMAN CELL AGING	05-01-90	04-30-91	BAYLOR COLLEGE OF MEDICINE	175,064
2 R01AG005366-04A2	WITKIN, JOAN M AGING LHRH SYSTEM/EM IMMUNOCYTOCHEMICAL STUDIES	07-01-90	06-30-91	COLUMBIA UNIVERSITY NEW YORK	135,408
7 U09AG005389-06	CHUI, HELENA CHANG SCIENTIFIC REVIEW AND EVALUATION AWARD	08-01-90	06-30-91	U.S. PHS PUBLIC ADVISORY GROUPS	719,000
5 R01AG005394-03	MASCIOLI, STEPHEN RISK FACTORS FOR HIP AND COLLES' FRACTURES	02-01-90	01-31-91	UNIVERSITY OF MINNESOTA OF MNPLS-ST PAUL	268,917
3 R01AG005394-03S1	GRIMM, RICHARD, H. JR RISK FACTORS FOR HIP COLLES FRACTURES	09-01-90	01-31-91	UNIVERSITY OF MINNESOTA OF MNPLS-ST PAUL	88,416
5 R01AG005407-03	CUMMINGS, STEVEN R RISK FACTORS FOR HIP AND COLLES' FRACTURES	02-01-90	01-31-91	UNIVERSITY OF CALIFORNIA SAN FRANCISCO	745,339
3 R01AG005407-03S1	CUMMINGS, STEVEN R RISK FACTORS FOR HIP AND COLLES' FRACTURES	09-30-90	01-31-91	UNIVERSITY OF CALIFORNIA SAN FRANCISCO	92,874
5 F32AG005422-03	KRISHNAN, ARUNA EFFECT OF AGE & HORMONES ON STEROID BINDING & ACTION	06-01-90	05-31-91	STANFORD UNIVERSITY	33,000
5 F32AG005426-03	ROGERS, PATRICIA A ALTERNATE PATHWAYS IN CELLULAR AGING	06-01-90	05-31-91	VIRGINIA POLYTECHNIC INST AND ST UNIV	28,000
5 R01AG005433-05	PROHOVNIK, ISAK A REGIONAL CEREBRAL BLOOD FLOW IN ALZHEIMER'S DISEASE	05-01-90	04-30-91	NEW YORK STATE PSYCHIATRIC INSTITUTE	231,060
5 F33AG005438-02	HAITZKIN, HOWARD COMMUNICATION WITH ELDERLY PATIENTS	01-01-90	12-31-90	UNIVERSITY OF CALIFORNIA IRVINE	34,500

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5 F32AG005447-04	SCHER, JESSICA AGING WITH A DISABILITY THE LATE EFFECTS OF POLIO	07-01-90	06-30-91	NATIONAL REHABILITATION HOSP (WASH, DC)	29,250
5 F32AG005448-03	MILLER, CLARENCE D MUTATION, DNA REPAIR AND FIBROBLAST DONOR AGE	03-01-90	02-28-91	U.S. GERONTOLOGY RESEARCH CENTER	33,500
5 F32AG005456-03	SZOT, PATRICIA ONTOGENY OF THE CNS VASOPRESSIN RECEPTOR	06-15-90	06-14-91	UNIVERSITY OF WASHINGTON	29,250
5 F32AG005465-02	HILL, WILLIAM D, III EPIOTOPE ANALYSIS OF NEUROFIBRILLARY TANGLE PROTEINS	12-29-89	12-28-90	UNIVERSITY OF PENNSYLVANIA	21,000
5 F32AG005475-02	PROBERO, DEBRA O A PROCESS-TRACING STUDY OF DISCHARGE DECISION MAKING	01-01-90	12-31-90	UNIVERSITY OF MINNESOTA OF MNPLS-ST PAUL	34,500
5 F32AG005479-02	MARTIN, JOEL H NEURON SPECIFIC GENES IN AGING AND ALZHEIMERS DISEASE	09-01-90	01-31-91	UNIVERSITY OF SOUTHERN CALIFORNIA	13,417
5 F32AG005481-02	POULAKOS, JENNIFER J AGING AND CHOLINERGIC ACTIONS ON NEUROPEPTIDE Y TURNOVER	09-05-90	09-04-91	UNIVERSITY OF FLORIDA	30,500
5 F32AG005486-02	TUN, PATRICIA A ATTENTIONAL RESOURCES AND LANGUAGE PROCESSING IN AGING	08-21-90	08-20-91	BRANDEIS UNIVERSITY	30,500
5 F32AG005488-02	EPPESON, JAMES R A GENERAL TOTAL SYNTHESIS OF D,1-PHYSOSTIGMINE	08-14-90	08-13-91	UNIVERSITY OF CALIFORNIA BERKELEY	21,000
5 F32AG005489-02	SHIGENAGA, MARK K ROLE OF OXIDATIVE DNA DAMAGE IN AGING AND CANCER	06-16-90	06-15-91	UNIVERSITY OF CALIFORNIA BERKELEY	21,000
5 F32AG005492-02	YANNARIELLO-BROWN, JUDITH I HYALURONATE RECEPTOR: ISOLATION AND AGING STUDIES	09-01-90	08-31-91	UNIVERSITY OF TEXAS MEDICAL BRANCH	29,250
5 F32AG005500-02	SHORS, TRACEY J AGING, STRESS & LONG-TERM POTENTIATION	08-01-90	07-31-91	UNIVERSITY OF SOUTHERN CALIFORNIA	29,250

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5 F31A005505-02	LINDAUER, MARTIN S CREATIVITY AND OLD AGE	09-01-90	08-31-91	UNIVERSITY OF MICHIGAN AT ANN ARBOR	34,500
1 F32A005514-01	WEISS, CRAIG AGING, CONDITIONING & THE OLIVO-CEREBELLAR SYSTEM	05-01-90	04-30-91	UNIVERSITY OF SOUTHERN CALIFORNIA	29,250
1 F32A005515-01	HOLMES, DONNA J FACTORS INFLUENCING AGING RATE IN VIRGINIA OPOSSUMS	07-01-90	06-30-91	HARVARD UNIVERSITY	29,250
1 F32A005517-01	LADINO, CYNTHIA A METHYLATION OF ABNORMAL PROTEINS IN STRESSED CELLS	07-01-90	06-30-91	HORCESTER FOUNDATION FOR EXPER BIOLOGY	21,000
1 F32A005525-01	LLOYD, JONATHAN M OPIATE PEPTIDE GENE EXPRESSION--REPRODUCTIVE AGING	07-01-90	06-30-91	UNIVERSITY OF MARYLAND BALT PROF SCHOOL	28,000
1 F32A005526-01	KIM, CHARLENE B Y MODIFICATIONS IN THE VISUAL PATHWAYS DURING AGING	09-01-90	08-31-91	UNIVERSITY OF WISCONSIN MADISON	20,000
1 F32A005528-01	LAPING, NICHOLAS J AGING AND GLUCOCORTICOID EFFECTS ON NEURAL PLASTICITY	07-01-90	06-30-91	UNIVERSITY OF SOUTHERN CALIFORNIA	21,000
1 F32A005531-01	DOBROMSKY, RICK T SPHINGOLIPIDS IN RETINOIC ACID ACTION	08-01-90	07-31-91	DUKE UNIVERSITY	20,000
1 F33A005532-01	CAMPBELL, RICHARD T QUASI-EXPERIMENTAL DESIGN AND LONGITUDINAL RESEARCH	09-01-90	08-31-91	NORTHWESTERN UNIVERSITY	33,000
3 P01A005557-03S1	FLORINI, JAMES R AGING AND SOMATONEURINS	02-01-90	11-30-90	SYRACUSE UNIVERSITY AT SYRACUSE	30,138
"3 P01A005561-05S1	HOUSE, JAMES S PRODUCTIVITY STRESS AND HEALTH IN MIDDLE AND LATE LIFE	07-16-90	06-31-91	UNIVERSITY OF MICHIGAN AT ANN ARBOR	28,000
2 P01A005562-06	HOLLOSZY, JOHN O PHYSIOLOGICAL ADAPTATIONS TO EXERCISE IN THE ELDERLY	09-01-90	04-30-91	WASHINGTON UNIVERSITY	746,973

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5 R29AG05591-05	CURA, LEE J PLACE IDENTITIES AMONG ELDERLY MIGRANTS AND NON-MIGRANTS	08-01-90	07-31-91	MELLESLEY COLLEGE	52,678
5 R29AG05592-06	CARSTENSEN, LAURA L BEHAVIORAL EFFECTS OF AGING IN LONG-TERM CARE	12-01-89	11-30-91	STANFORD UNIVERSITY	103,757
5 R01AG05601-06	MONNIER, VINCENT M BROWNING OF HUMAN COLLAGEN IN DIABETES AND AGING	04-01-90	03-31-91	CASE WESTERN RESERVE UNIVERSITY	121,401
5 R29AG05609-05	BROHN, SCOTT C AGING AND THE INTERACTION OF DEMOGRAPHY AND HEARING LOSS	05-01-90	04-30-91	GALLAUDET UNIVERSITY	82,237
5 R01AG05627-06	BLASCHKE, TERENCE F AGING AND IN VIVO VASCULAR RESPONSIVENESS IN MEN	08-01-90	07-31-91	STANFORD UNIVERSITY	177,450
2 R37AG05628-06	GOOD, ROBERT A CELLULAR ENGINEERING TO TREAT, PREVENT DISEASES OF AGING	04-01-90	03-31-91	UNIVERSITY OF SOUTH FLORIDA	132,548
3 R01AG05633-06S1	GOOD, ROBERT A NUTRITION AND DISEASES OF AGING--AUTOIMMUNITY	07-01-89	06-30-91	UNIVERSITY OF SOUTH FLORIDA	51,308
5 R01AG05657-06	PETTEGREW, JAY W NMR STUDIES OF BRAIN AGING IN ALZHEIMER'S DISEASE	08-01-90	07-31-91	UNIVERSITY OF PITTSBURGH AT PITTSBURGH	139,103
5 R01AG05670-03	SHLAES, DAVID M ANTIBIOTIC RESISTANT BACILLI IN A NURSING HOME UNIT	09-01-90	08-31-91	CASE WESTERN RESERVE UNIVERSITY	69,553
2 P50AG05681-07	BERG, LEONARD WASHINGTON UNIVERSITY ALZHEIMER'S DISEASE RESEARCH CENTE	08-01-90	04-30-91	WASHINGTON UNIVERSITY	1,238,112
3 P50AG05681-07S1	BERG, LEONARD WASHINGTON UNIVERSITY ADRG: IOWA/MISSOURI CONSORTIUM	09-01-90	04-30-91	WASHINGTON UNIVERSITY	149,071
5 R37AG05683-06	GLENNER, GEORGE G CEREBROVASCULAR AMYLOID PROTEIN IN ALZHEIMER'S DISEASE	09-01-90	08-31-91	UNIVERSITY OF CALIFORNIA SAN DIEGO	222,571

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GRANT NUMBER	PRINCIPAL INVESTIGATOR TITLE	BUDGET START	DATES END	INSTITUTION	TOTAL		
5 R01AG005717-06	KRISHNARAJ, RAJABATHER AGE-ASSOCIATED ALTERATIONS IN HUMAN NK CELL SYSTEM	09-01-90	08-31-91	UNIVERSITY OF ILLINOIS AT CHICAGO	137,754		
5 R01AG005739-05	BALL, KARLENE K. IMPROVEMENT OF VISUAL PROCESSING IN OLDER ADULTS	04-01-90	03-31-91	WESTERN KENTUCKY UNIVERSITY	120,639		
7 P01AG005793-05	JOHNSTON, C CONRAD, JR SOME DETERMINANTS OF BONE MASS/ELDERLY	12-01-89	11-30-90	INDIANA UNIV-PURDUE UNIV AT INDIANAPOLIS	807,680		
5 P01AG005842-05	WISE, DAVID A. ECONOMICS OF AGING-COMPETING CONTINUATION	01-01-90	12-31-90	NATIONAL BUREAU OF ECONOMIC RESEARCH	1,052,016		
3 P01AG005842-05S1	WISE, DAVID A. SUPPLEMENT TO ECONOMICS OF AGING	08-01-90	12-31-90	NATIONAL BUREAU OF ECONOMIC RESEARCH	53,666		
5 R01AG005885-03	MODAN, BARUCH NATIONAL EPIDEMIOLOGICAL STUDY OF THE OLDEST OLD	09-01-90	08-31-91	CHAIM SHEBA MEDICAL CENTER	99,440		
5 R37AG005890-06	BUDINGER, THOMAS F CEREBRAL BLOOD FLOW PATTERNS IN ALZHEIMER'S DISEASE	07-01-90	06-30-91	UNIVERSITY OF CALIF-LANHEMC BERKELEY LAB	309,969		
5 R01AG005891-06	FRANGIONE, BLAS AMYLOIDOSIS AND ALZHEIMER'S DISEASE	07-01-90	06-30-91	NEW YORK UNIVERSITY	211,482		
5 R01AG005892-09	IOBAL, KHALID ALZHEIMER NEUROFIBRILLARY TANGLES: BIOCHEMICAL STUDIES	05-01-90	04-30-91	INSTITUTE FOR BASIC RES IN DEV DISABIL	126,023		
5 R01AG005893-11	HERSH, LOUIS B CHOLINE ACETYLTRANSFERASE	07-01-90	06-30-91	UNIVERSITY OF TEXAS SW MED CTR/DALLAS	120,888		
5 R01AG005894-18	FINE, RICHARD E COATED VESICLES, MEMBRANE TRANSPORT IN MUSCLE, BRAIN	05-01-90	04-30-91	BOSTON UNIVERSITY	255,050		
5 R01AG005917-06	ROTUNDO, RICHARD L REGULATION OF ACETYLCHOLINESTERASE SYNTHESIS/ASSEMBLY	05-01-90	04-30-91	UNIVERSITY OF MIAMI	89,063		

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2 R01AG05940-05	SCHWARTZ, JANICE B EFFECT OF AGING ON CALCIUM BLOCKER KINETICS/DYNAMICS	08-01-90	07-31-91	UNIVERSITY OF CALIFORNIA SAN FRANCISCO	286,426
2 R01AG05944-04A1	CHANG, HOWARD T LIMBIC-BASAL GANGLIA-CORTEX INTERACTIONS	04-01-90	03-31-91	UNIVERSITY OF TENNESSEE AT MEMPHIS	101,326
5 R01AG05963-04	RICE, GRACE E OLDER ADULTS' MEMORY FOR WRITTEN MEDICAL INFORMATION	06-01-90	05-31-91	ARIZONA STATE UNIVERSITY	129,396
5 R01AG05972-05	BOWLES, MANDY L AN ANALYSIS OF WORD RETRIEVAL DEFICITS IN THE AGED	12-01-89	11-30-90	BOSTON UNIVERSITY	111,682
5 R01AG05977-03	ROGOL, ALAN D REGULATION OF GONADOTROPIN SECRETION IN AGING WOMEN	09-30-90	07-31-91	UNIVERSITY OF VIRGINIA CHARLOTTESVILLE	120,401
5 R29AG06017-05	LAKOSKI, JOAN M AGING AND ESTROGEN ON BIOGENIC AMINE CELL PHYSIOLOGY	12-01-89	11-30-91	UNIVERSITY OF TEXAS MEDICAL BRANCH	93,760
5 R01AG06036-05	ARNSTEN, AMY F COGNITIVE LOSS WITH AGE: ROLE OF CORTICAL CATECHOLAMINES	12-01-89	11-30-90	YALE UNIVERSITY	137,911
5 R37AG06060-05	FELTEN, DAVID L MPTP--DEGENERATION OF MONOAMINE SYSTEMS, AND AGING	08-01-90	07-31-91	UNIVERSITY OF ROCHESTER	145,125
5 R01AG06066-04	DEMENT, WILLIAM C FOLLOW-UP OF ELDERLY PATIENTS WITH SLEEP APNEA	02-01-90	01-31-91	STANFORD UNIVERSITY	223,308
2 R01AG06072-06	CZEISLER, CHARLES A DISRUPTED SLEEP IN THE ELDERLY: RESPONSE TO PHOTOTHERAPY	07-01-90	06-30-91	BRIGHAM AND WOMEN'S HOSPITAL	369,681
"5 R37AG06079-07	HOLICK, MICHAEL F INFLUENCE OF AGE ON 7-DEHYDROCHOLESTEROL IN THE SKIN	05-01-90	04-30-91	BOSTON UNIVERSITY	174,099
5 R37AG06108-06	HORNSBY, PETER J AGING OF ENDOCRINE CELLS IN CULTURE	04-01-90	03-31-91	MEDICAL COLLEGE OF GEORGIA	164,813

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2 R37A006116-06	DICE, JAMES F. JR PROTEIN DEGRADATION IN AGING HUMAN FIBROBLASTS	04-01-90	03-31-91	TUFTS UNIVERSITY	206,151
2 R01A006127-04	GILDEN, DONALD H NEUROBIOLOGY OF VARICELLA-ZOSTER VIRUS	07-01-90	06-30-91	UNIVERSITY OF COLORADO HLTH SCIENCES CTR	241,617
5 R01A006138-04	SCHEUER, JAMES EFFECT OF EXERCISE IN PREVENTING CARDIAC AGING	03-01-90	02-28-91	MONTEFIORE MEDICAL CENTER (BRONX, NY)	138,594
5 R01A006148-05	JAZMINSKI, S MICHAL CELLULAR AGING IN A YEAST MODEL SYSTEM	05-01-90	04-30-91	LOUISIANA STATE UNIV MED CTR NEW ORLEANS	178,006
5 R01A006170-05	POTTER, LINCOLN T CHOLINERGIC MECHANISMS IN AGING AND ALZHEIMER'S DISEASE	05-01-90	04-30-91	UNIVERSITY OF MIAMI	189,791
5 R01A006172-06	KOSIK, KENNETH S BIOCHEMISTRY AND PATHOBIOLOGY OF MAP 2 IN NEURONS	01-01-90	12-31-90	BRIGHAM AND WOMEN'S HOSPITAL	136,475
5 R29A006182-05	FORSTER, MICHAEL J IMMUNOLOGIC CORRELATES OF MEMORY DECLINE	07-01-90	06-30-91	TEXAS COLLEGE OF OSTEOPATHIC MEDICINE	82,655
5 R01A006217-04	FELDMAN, MARTIN L AUDITORY ANATOMY IN AGING RATS WITH EXTENDED LIFESPANS	08-01-90	07-31-91	BOSTON UNIVERSITY	136,994
7 R01A006221-05	TATE, CHARLOTTE A MYOCARDIAL RESPONSE TO EXERCISE DURING SEMESCENCE	07-06-90	03-31-91	UNIVERSITY OF HOUSTON-UNIVERSITY PARK	143,946
2 R01A006226-04	MEYER, EDWIN M AGING AND BRAIN ACETYLCHOLINE RELEASE	01-01-90	12-31-90	UNIVERSITY OF FLORIDA	92,335
"5 R01A006232-04	HARRISON, DAVID E NUTRITIONAL EFFECTS ON AGING	09-01-90	08-31-91	JACKSON LABORATORY	297,145
5 R01A006246-05	KELLEY, KEITH M HORMONAL RESTORATION OF A FUNCTIONAL THYMUS DURING AGING	05-01-90	04-30-91	UNIVERSITY OF ILLINOIS URBANA-CHAMPAIGN	178,095

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GRANT NUMBER	PRINCIPAL INVESTIGATOR TITLE	BUDGET START	DATES END	INSTITUTION	TOTAL		
2 R44AG06259-02A2	DENNISON, DARWIN COMPUTERIZED NUTRITION PROGRAM FOR SENIOR CITIZENS	05-01-90	04-30-91	DINE SYSTEMS, INC.	229,541		
5 R01AG06265-05	PARK, DENISE C EFFECTS OF CONTEXT ON THE AGING MEMORY	01-01-90	12-31-90	UNIVERSITY OF GEORGIA	82,898		
2 R01AG06278-05A1	ALBRIGHT, JULIA M AGING OF IMMUNITY TO PARASITES	05-01-90	04-30-91	GEORGE WASHINGTON UNIVERSITY	289,733		
3 R01AG06278-05A1S1	ALBRIGHT, JULIA M AGING OF IMMUNITY TO PARASITES	09-01-90	04-30-91	GEORGE WASHINGTON UNIVERSITY	48,784		
5 R01AG06299-05	GALLI, URI ANTI-OAL IGO ON HUMAN RED CELLS--A MODEL FOR CELL AGING	08-01-90	07-31-91	UNIVERSITY OF CALIFORNIA SAN FRANCISCO	212,137		
5 P01AG06309-05	MALETTA, GARE J CLINICAL RESEARCH CENTER FOR MANAGEMENT OF DEMENTIA	04-01-90	03-31-91	UNIVERSITY OF MINNESOTA OF MNPLS-ST PAUL	309,980		
5 R01AG06319-05	KEMPER, SUSAN GERIATRIC PSYCHOLINGUISTICS	07-01-90	06-30-91	UNIVERSITY OF KANSAS LAWRENCE	88,514		
5 R01AG06322-02	MAQAZINER, JAY EPIDEMIOLOGY--DETERMINANTS OF RECOVERY FROM HIP FRACTURE	01-01-90	12-31-90	UNIVERSITY OF MARYLAND BALT PROF SCHOOL	333,108		
5 R01AG06346-04	ROSE, MICHAEL R GENETICALLY POSTPONED SENESENCE IN DROSOPHILA	07-01-90	06-30-91	UNIVERSITY OF CALIFORNIA IRVINE	129,108		
5 R01AG06347-04	BUSBEE, DAVID B AGE-RELATED INHIBITION OF DNA SYNTHESIS INITIATION	05-01-90	04-30-91	TEXAS A&M AND MECH UNIV COLLEGE STATION	104,948		
*5 R01AG06350-05	ABRAHAM, GEORGE M IMMUNOLOGIC ANALYSIS OF PREMALIGANT & MALIGNANT B-CELLS	08-01-90	07-31-91	UNIVERSITY OF ROCHESTER	176,483		
5 R01AG06352-05	MARTIN, ARLENE P MEMBRANE LIPID--ASSOCIATED CHANGES DURING AGING	09-01-90	08-31-91	UNIVERSITY OF MISSOURI COLUMBIA	95,646		

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5 R01AG06383-03	WOOD, JOHN G ALZHEIMER & AGING BRAIN CYTOSKELETAL PHOSPHORYLATION	04-01-90	03-31-91	EMORY UNIVERSITY	90,671
5 R01AG06384-04	LUINE, VICTORIA M HORMONAL INFLUENCES ON FOREBRAIN CHOLINERGIC SYSTEMS	12-01-89	11-30-91	HUNTER COLLEGE	107,510
5 R29AG06387-05	STERN, STEVEN N JOB EXIT BEHAVIOR OF OLDER WORKERS	07-01-90	06-30-91	UNIVERSITY OF VIRGINIA CHARLOTTESVILLE	84,382
5 R29AG06407-05	KOMM, BARRY S ROLE OF ESTROGEN IN BONE BIOLOGY AND OSTEOPOROSIS	07-01-90	06-30-91	UNIVERSITY OF ARIZONA	83,841
5 R01AG06432-04	HALSEY, JAMES H, JR REGIONAL CEREBRAL BLOOD FLOW IN PROGRESSIVE DEMENTIA	08-01-90	07-31-91	UNIVERSITY OF ALABAMA AT BIRMINGHAM	132,463
5 R29AG06434-05	GERHARDT, GREG A AGE-INDUCED CHANGES IN MONOAMINE PRESYNAPTIC FUNCTION	08-01-90	07-31-91	UNIVERSITY OF COLORADO HLTH SCIENCES CTR	80,964
7 R01AG06442-06	PAIGE, GARY D SENSORY-MOTOR/ADAPTIVE MECHANISMS IN EQUILIBRIUM CONTROL	09-01-90	08-31-91	UNIVERSITY OF ROCHESTER	189,055
5 R01AG06457-05	MORAK, FAY B PERIPHERAL AND CENTRAL POSTURAL DISORDERS IN THE ELDERLY	09-01-90	08-31-91	GOOD SAMARITAN HOSP & MED CTR(PRTLND,OR)	203,832
5 R29AG06484-05	WRONSKI, THOMAS J QUANTITATIVE BONE HISTOLOGY AFTER OVARECTOMY	07-01-90	06-30-91	UNIVERSITY OF FLORIDA	74,042
5 R37AG06490-05	DEMENT, WILLIAM C SLEEP, EXERCISE, AGING AND THE CIRCADIAN SYSTEM	09-01-90	08-31-91	STANFORD UNIVERSITY	154,070
"5 R44AG06511-03	HOLMES, DOUGLAS COMPUTER BASED INTERVENTION RE DEMENTED ELDERLY	01-01-90	12-31-91	DMH ASSOCIATES, INC.	108,999
5 R01AG06528-05	DAVIDSON, JEFFREY M ELASTIC AND COLLAGEN IN THE AGING PROCESS	02-01-90	01-31-91	VANDERBILT UNIVERSITY	115,439

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5 R01A006533-05	WILSON, PATRICIA D EFFECT OF AGING ON RENAL EPITHELIAL CELLS	04-01-90	03-31-91	UNIV OF MED/DENT NJ-R M JOHNSON MED SCH	110,375
2 R01A006537-05	SEALS, DOUGLAS R SYMPATHETIC NERVOUS SYSTEM ACTIVITY & HUMAN AGING	08-15-90	07-31-91	UNIVERSITY OF ARIZONA	135,837
5 R01A006557-05	ROPER, STEPHEN D NEURAL INFLUENCE ON AGING OF RECEPTOR CELLS	04-01-90	03-31-91	COLORADO STATE UNIVERSITY	135,302
5 R37A006559-03	JOHNSON, COLLEEN L THE SOCIAL WORLD OF THE OLDEST OLD	03-01-90	02-28-91	UNIVERSITY OF CALIFORNIA SAN FRANCISCO	143,824
2 P01A006569-04	HARRELL, LINDY E ALZHEIMER'S DISEASE: A MULTIDISCIPLINARY APPROACH	08-01-90	05-31-91	UNIVERSITY OF ALABAMA AT BIRMINGHAM	782,085
5 R01A006584-05	GIVEN, CHARLES H CAREGIVER RESPONSES TO MANAGING ELDERLY PATIENTS AT HOME	05-01-90	04-30-91	MICHIGAN STATE UNIVERSITY	295,848
5 R01A006591-04	KITSON, GAY C VIOLENT DEATH--LIFE COURSE ADJUSTMENT FOR WIDOWS	07-01-90	06-30-91	UNIVERSITY OF AKRON	236,773
2 R01A006601-04	KOSIK, KENNETH S THE PATHOBIOLOGY OF TAU PROTEIN	01-01-90	12-31-90	BRIGHAM AND WOMEN'S HOSPITAL	174,479
5 R37A006605-04	CORKIN, SUZANNE H THEORETICAL ANALYSIS OF LEARNING IN AGE-RELATED DISEASE	02-01-90	01-31-91	MASSACHUSETTS INSTITUTE OF TECHNOLOGY	176,637
5 R01A006621-04	SCHULTZ, ALBERT B BIOMECHANICS OF HUMAN FALLS IN YOUNG ADULTS	08-01-90	07-31-91	UNIVERSITY OF MICHIGAN AT ANN ARBOR	180,998
*2 R01A006633-04	SAPOLSKY, ROBERT M AGING AND HIPPOCAMPAL NEURON LOSS: ROLE OF GLUCOCORTICOID	01-01-90	12-31-90	STANFORD UNIVERSITY	157,752
5 R01A006635-03	LONG, CALVIN L PROTEIN & ENERGY REQUIREMENTS IN THE GERIATRIC PATIENT	03-01-90	06-30-91	BAPTIST MEDICAL CENTERS	117,144

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2 R01AG06641-04	ROBBINS, NORMAN PLASTICITY OF MOTOR NERVE TERMINALS IN YOUNG & OLD MICE	04-01-90	03-31-91	CASE WESTERN RESERVE UNIVERSITY	126,939
5 R37AG06643-04	LIANG, JERSEY WELL-BEING AMONG THE AMERICAN AND JAPANESE ELDERLY	05-01-90	04-30-91	UNIVERSITY OF MICHIGAN AT ANN ARBOR	90,370
3 R37AG06643-04S1	LIANG, JERSEY WELL-BEING AMONG THE AMERICAN & JAPANESE ELDERLY	05-01-90	04-30-91	UNIVERSITY OF MICHIGAN AT ANN ARBOR	264,839
2 R01AG06656-04	YOUNKIN, STEVEN O ACHE, CHAT & CHOLINERGIC NEURONS IN AGING & AD	12-01-89	11-30-90	CASE WESTERN RESERVE UNIVERSITY	198,326
5 R01AG06665-03	HORWITZ, BARBARA A EXERCISE EFFECTS ON RESPONSES TO COLD	04-01-90	03-31-91	UNIVERSITY OF CALIFORNIA DAVIS	177,936
5 R44AG06753-03	LEIDER, VON O MEMORY PERFECT: COMPUTERIZED MEMORY TRAINING FOR ELDERLS	01-01-90	12-31-90	DECISION SYSTEMS	231,030
5 R01AG06766-05	WALKER, ALEXIS J PARENT CARING AND THE MOTHER-DAUGHTER RELATIONSHIP	06-01-90	05-31-91	OREGON STATE UNIVERSITY	198,499
2 U01AG06781-04A1	LARSON, ERIC B ALZHEIMER'S DISEASE PATIENT REGISTRY	05-01-90	03-31-91	UNIVERSITY OF WASHINGTON	362,127
5 U01AG06786-05	KURLAND, LEONARD T ALZHEIMER'S DISEASE PATIENT REGISTRY	09-01-90	08-31-91	MAYO FOUNDATION	378,319
5 U01AG06790-05	HEYMAN, ALBERT CONSORTIUM--ESTABLISHING AN ALZHEIMER'S DISEASE REGISTAR	09-01-90	08-31-91	DUKE UNIVERSITY	1,060,099
*5 R01AG06794-02	CZAJA, SARA J AGE DIFFERENCES IN TASK STRESS FOR COMPUTER TASKS	01-01-90	06-30-91	STATE UNIVERSITY OF NEW YORK AT BUFFALO	41,765
2 P01AG06803-04	DAVIES, PETER FUNDAMENTAL STUDIES ON ALZHEIMERS DISEASE	08-01-90	05-31-91	YESHIVA UNIVERSITY	886,752

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5 R01AG06806-03	KIRASIC, KATHLEEN C AGING, COGNITIVE PROCESSING, AND LEARNING ABILITIES	05-01-90	04-30-91	UNIVERSITY OF SOUTH CAROLINA AT COLUMBIA	82,596
5 R29AG06810-04	GOING, SCOTT B FAT AND FAT FREE BODY COMPOSITION IN OLDER MEN AND WOMEN	05-01-90	04-30-91	UNIVERSITY OF ARIZONA	76,463
5 P01AG06815-04	PECK, WILLIAM A FALLS AND HIP FRACTURES--CAUSES, RISKS, AND OUTCOMES	05-01-90	04-30-91	JEWISH HOSPITAL OF ST. LOUIS	946,704
7 R01AG06819-04	RICHARDSON, ARLAN O THE ROLE OF GENE EXPRESSION IN GLUCONEOGENESIS	08-01-90	04-30-91	UNIVERSITY OF TEXAS HLTH SCI CTR SAN ANT	58,983
5 R37AG06826-05	SALTHOUSE, TIMOTHY A ADULT AGE DIFFERENCES IN REASONING AND SPATIAL ABILITIES	08-01-90	07-31-91	GEORGIA INSTITUTE OF TECHNOLOGY	130,449
5 R01AG06831-03	LOGAN, JOHN R INFORMAL AND FORMAL SUPPORTS IN AGING	05-01-90	04-30-91	STATE UNIVERSITY OF NEW YORK AT ALBANY	135,919
5 P01AG06836-03	MONK, TIMOTHY H AGING, TEMPERATURE & SLEEP--CYCLIC REGULATORY MECHANISMS	04-01-90	03-31-91	UNIVERSITY OF PITTSBURGH AT PITTSBURGH	530,071
5 R01AG06841-04	BEIDLER, LLOYD M EFFECT OF AGE ON TASTE	06-01-90	05-31-91	FLORIDA STATE UNIVERSITY	148,694
5 R29AG06849-03	OSTERGAARD, ARNE L PRIMING & MEMORY IN AMNESIA & ALZHEIMERS DISEASE	03-01-90	02-28-91	UNIVERSITY OF CALIFORNIA SAN DIEGO	72,883
5 R29AG06854-03	SCHWAB, RISE IMPAIRED PROLIFERATION OF T LYMPHOCYTES FROM AGED HUMANS	08-01-90	07-31-91	CORNELL UNIVERSITY MEDICAL CENTER	99,129
*5 R29AG06856-05	TAYLOR, ROBERT J FAMILIAL/NON-FAMILIAL SUPPORT NETWORK AND ELDERLY	09-01-90	08-31-91	UNIVERSITY OF MICHIGAN AT ANN ARBOR	83,121
5 R01AG06860-04	CATHCART, EDGAR S AMYLOID, AGING AND DIET	09-01-90	08-31-91	BOSTON UNIVERSITY	146,817

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5 P01AG06872-04	BOWMAN, BARBARA H MOLECULAR GENETIC MECHANISMS OF AGING	05-01-90	04-30-91	UNIVERSITY OF TEXAS HLTH SCI CTR SAN ANT	739,118
2 R01AG06886-04	MC QUE, MATTHEW K A THIN STUDY OF NORMAL AGING	09-01-90	08-31-91	UNIVERSITY OF MINNESOTA OF MNPLS-ST PAUL	186,523
5 R01AG06912-04	DUCKLES, SUE P VASCULAR ADRENERGIC RESPONSIVENESS DURING AGING	02-01-90	01-31-91	UNIVERSITY OF CALIFORNIA IRVINE	157,590
5 R01AG06929-04	PREUSS, HARRY O MACRONUTRIENTS ON AGE-RELATED HYPERTENSION	03-01-90	02-28-91	GEORGETOWN UNIVERSITY	192,134
5 R01AG06942-04	VIRMANI, RENU MECHANISMS RESPONSIBLE FOR AGE-RELATED HYPERTENSION	01-01-90	12-31-90	AMERICAN REGISTRY OF PATHOLOGY, INC.	133,395
5 R01AG06943-04	VLASSARA, HELEN GLYCOSYLATED PROTEINS IN AGE AND HYPERTENSION	02-01-90	01-31-91	ROCKEFELLER UNIVERSITY	155,403
5 R01AG06945-04	BLAIR, STEVEN M IMPACT OF PHYSICAL FITNESS AND EXERCISE ON HEALTH	04-01-90	03-31-91	INSTITUTE FOR AEROBICS RESEARCH	286,956
5 R44AG06954-03	MENDELL, WILLIAM J MAMMALIAN DNA SEQUENCE MAPPING CENTER	06-01-90	05-31-91	GENETICS DATA SERVICES, INC.	141,475
2 R44AG06957-02	LEIBER, VON O COMPUTERIZED MEDICATION REMINDER SYSTEM FOR THE ELDERLY	02-01-90	01-31-91	DECISION SYSTEMS	279,500
5 R29AG06970-05	WASHBURN, RICHARD A EPIDEMIOLOGY OF ACTIVITY IN A BIRACIAL OLDER POPULATION	09-15-90	08-31-91	HEW ENGLAND RESEARCH INSTITUTE, INC.	96,520
*5 R29AG06977-05	ROSENTHAL, MARK J CENTRAL REGULATION OF GLUCOCORTICOIDES--EFFECTS OF AGE	09-01-90	08-31-91	UNIVERSITY OF CALIFORNIA LOS ANGELES	67,393
5 R37AG07001-04	LAWTON, M POWELL AFFECT, NORMAL AGING, AND PERSONAL COMPETENCE	07-01-90	06-30-91	PHILADELPHIA GERIATRIC CTR-FRIEDMAN HOSP	149,703

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5 R29AG07004-04	KENNEY, WILLIAM L HEAT STRESS AND THERMOREGULATION: AGE AND GENDER EFFECTS	09-01-90	08-31-91	PENNSYLVANIA STATE UNIVERSITY-UNIV PARK	91,514
5 R37AG07025-04	MANTON, KENNETH G FORECASTING LIFE EXPECTANCY AND ACTIVE LIFE	08-01-90	07-31-91	DUKE UNIVERSITY	194,147
5 R01AG07046-24	MULTQUIST, DONALD E REDOX SYSTEMS OF ERYTHROCYTES	02-01-90	01-31-91	UNIVERSITY OF MICHIGAN AT ANN ARBOR	138,462
5 R01AG07050-03	RUBINSTEIN, ROBERT L LIFESTYLES AND GENERATIVITY OF CHILDLESS OLDER WOMEN	04-01-90	03-31-91	PHILADELPHIA GERIATRIC CTR-FRIEDMAN HOSP	153,137
5 R29AG07069-04	HORNILE, HOWARD J ANIMAL MODELS OF DEMENTIA: NEUROTRANSMITTER INTERACTIONS	09-01-90	08-31-91	WAYNE STATE UNIVERSITY	67,826
5 R01AG07094-04	WALLACE, ROBERT B TEACHING NURSING HOME	09-01-90	08-31-91	UNIVERSITY OF IOWA	540,575
2 R01AG07113-04	MEIER, DIANE E INFLUENCE OF RACE AND AGE ON BONE HOMEOSTASIS	08-01-90	07-31-91	MOUNT SINAI SCHOOL OF MEDICINE	149,803
2 R01AG07114-04	GILCHRIST, BARBARA A AGING: CELL GROWTH AND DIFFERENTIATION	08-01-90	07-31-91	BOSTON UNIVERSITY	201,980
5 R29AG07127-05	PERLMUTTER, LYNN S CALPAIN AND SUBSTRATES IN AGED AND ALZHEIMER BRAINS	09-01-90	08-31-91	UNIVERSITY OF SOUTHERN CALIFORNIA	89,532
5 R29AG07135-04	GALINSKY, RAYMOND E ETHANOL, THE AGING LIVER, AND DRUG SULFATION	08-01-90	07-31-91	UNIVERSITY OF UTAH	90,805
5 R01AG07137-04	MC ARDLE, J JACK GROWTH CURVES OF ADULT INTELLIGENCE	06-01-90	05-31-91	UNIVERSITY OF VIRGINIA CHARLOTTESVILLE	83,144
5 R01AG07139-03	JETTE, ALAN M ORAL HEALTH OF OLDER ADULTS	04-01-90	03-31-91	NEW ENGLAND RESEARCH INSTITUTE, INC.	543,747

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5 R29AG07141-04	CLAIBORNE, BRENDA J AGE-RELATED STRUCTURAL CHANGES IN MAMMALIAN NEURONS	08-01-90	07-31-91	UNIVERSITY OF TEXAS SAN ANTONIO	88,804
5 R01AG07153-03	BELMONT, JOHN M PROBLEM SOLVING AND MEMORY IN ELDERLY ADULTS	04-01-90	03-31-91	UNIVERSITY OF KANSAS COL HLTH SCI & HOSP	122,356
5 R01AG07178-03	ALLMAN, RICHARD M PRESSURE SORES AMONG BEDRIDDEN HOSPITALIZED ELDERLY	08-01-90	07-31-91	UNIVERSITY OF ALABAMA AT BIRMINGHAM	181,210
5 R29AG07179-04	CHATTERS, LINDA M SUBJECTIVE WELL-BEING OF OLDER BLACKS	09-01-90	08-31-91	UNIVERSITY OF MICHIGAN AT ANN ARBOR	82,419
5 R29AG07180-04	MAZZEO, ROBERT S CATECHOLAMINE RESPONSE WITH AGE AND TRAINING	09-01-90	08-31-91	UNIVERSITY OF COLORADO AT BOULDER	71,197
5 R37AG07181-04	BARRETT-CONNOR, ELIZABETH L RISK FACTORS FOR OSTEOPOROSIS IN THE ELDERLY	08-01-90	07-31-91	UNIVERSITY OF CALIFORNIA SAN DIEGO	430,597
5 R37AG07182-04	MC KINLAY, JOHN B PATHWAYS TO PROVISION OF CARE FOR FRAIL OLDER PERSONS	07-01-90	06-30-91	NEW ENGLAND RESEARCH INSTITUTE, INC.	339,650
5 R29AG07194-03	DAVIS, BARBARA J NEURAL REGULATION OF THE ENDOCRINE PANCREAS IN AGED MICE	12-01-89	11-30-90	UNIVERSITY OF ROCHESTER	95,395
5 R37AG07198-04	MANTON, KENNETH O FUNCTIONAL & HEALTH CHANGES OF THE ELDERLY--1982-1988	07-01-90	06-30-91	DUKE UNIVERSITY	400,033
5 R4AG07199-03	WASHBURN, RICHARD A A PHYSICAL ACTIVITY QUESTIONNAIRE FOR OLDER ADULTS	09-01-90	06-30-91	NEW ENGLAND RESEARCH INSTITUTE, INC.	145,599
*2 R01AG07218-04A1	HERMAN, BRIAN A MECHANISMS OF CELL DEATH IN HEPATOCYTES	07-01-90	06-30-91	UNIVERSITY OF NORTH CAROLINA CHAPEL HILL	192,047
5 R01AG07224-05	FEINBERG, IRMIN MAKING-SLEEP RELATIONSHIPS IN DEVELOPMENT AND AGING	09-01-90	08-31-91	UNIVERSITY OF CALIFORNIA DAVIS	108,528

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5 R01AG07225-02	WEI, JEANNE Y ORTHOSTATIC HYPOTENSION IN OLDER PERSONS	12-01-89	11-30-90	BETH ISRAEL HOSP (BOSTON)	98,586
5 R01AG07226-03	SCHUCKER, DOUGLAS L AGING IMPAIRMENT OF GUT MUCOSAL IMMUNITY	07-01-90	06-30-91	UNIVERSITY OF CALIFORNIA SAN FRANCISCO	78,566
5 R01AG07230-02	BLAU, DAVID M DYNAMICS OF RETIREMENT BEHAVIOR OF INDIVIDUALS	08-01-90	07-31-91	UNIVERSITY OF NORTH CAROLINA CHAPEL HILL	57,923
5 P01AG07232-02	MAYEUX, RICHARD P EPIDEMIOLOGY OF DEMENTIA IN AN URBAN COMMUNITY	02-01-90	01-31-91	COLUMBIA UNIVERSITY NEW YORK	1,427,432
5 P01AG07347-03	OILDEM, DONALD H CHRONIC NEUROLOGIC DISEASE--NEUROTROPIC VIRUS	04-01-90	03-31-91	UNIVERSITY OF COLORADO HLTH SCIENCES CTR	754,030
5 R01AG07348-03	LANGSTON, J WILLIAM MPTP AND AGING--MOLECULAR/MORPHOLOGICAL CORRELATES	04-01-90	03-31-91	INSTITUTE FOR MED RES SANTA CLARA COUNTY	179,287
5 R01AG07350-03	TOBIS, JEROME S EXPERIMENTAL INTERVENTION FOR THE REDUCTION OF FALLS	08-01-90	07-31-91	UNIVERSITY OF CALIFORNIA IRVINE	240,451
5 R29AG07352-03	LARISH, DOUGLAS D ECONOMICAL WALKING IN THE AGED	08-01-90	07-31-91	ARIZONA STATE UNIVERSITY	103,202
5 R29AG07359-03	BURMER, GLENNA C CLONING OF THE WERNER'S SYNDROME DEFECT	04-01-90	03-31-91	UNIVERSITY OF WASHINGTON	93,251
5 R01AG07363-03	WEISS, ROBERT S TRANSITION TO RETIREMENT FROM MANAGERIAL ROLES	03-01-90	02-28-91	UNIVERSITY OF MASSACHUSETTS BOSTON	150,936
5 R01AG07367-03	ROGERS, JOSEPH PRESENCE AND ROLE OF IMMUNE MARKERS IN ALZHEIMER'S BRAIN	09-01-90	08-31-91	INSTITUTE FOR BIOGERONTOLOGY RESEARCH	124,253
5 R01AG07369-03	SCHIRCH, VERNE O PROTEIN DEAMIDATION; ROLE IN PROTEIN TURNOVER & AGING	03-01-90	02-28-91	VIRGINIA COMMONWEALTH UNIVERSITY	94,972

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GRANT NUMBER	PRINCIPAL INVESTIGATOR TITLE	BUDGET START	DATES END	INSTITUTION	TOTAL
5 R01AG07370-02	STERN, YAAKOV PREDICTORS OF SEVERITY IN ALZHEIMERS DISEASE	02-01-90	01-31-91	COLUMBIA UNIVERSITY NEW YORK	303,911
5 R37AG07388-03	YOUNG, VERNON R REGULATION OF ENERGY METABOLISM IN AGING MAN	08-01-90	07-31-91	MASSACHUSETTS INSTITUTE OF TECHNOLOGY	290,792
5 R01AG07418-03	CARROLL, FRANK I NEW MUSCARINIC AGENTS--SELECTIVITY OF ACTION	04-01-90	03-31-91	RESEARCH TRIANGLE INSTITUTE	137,364
5 R29AG07424-03	ECKENSTEIN, FELIX P NEUROTROPHIC SUPPORT IN AGING & ALZHEIMER'S DISEASE	04-01-90	03-31-91	OREGON HEALTH SCIENCES UNIVERSITY	94,303
5 R01AG07425-03	RICE, DOROTHY P EPIDEMIOLOGY OF CHRONIC DISEASE IN THE OLDEST OLD	07-01-90	06-30-91	KAISER FOUNDATION RESEARCH INSTITUTE	443,279
5 R01AG07429-02	HEPPEL, LEON A BIOCHEMICAL CHANGES IN SENESCENT HUMAN FIBROBLASTS	06-01-90	05-31-91	CORNELL UNIVERSITY ITHACA	54,651
5 R01AG07433-02	RIED, I DOUGLAS ANTIHYPERTENSIVE DRUG USE AND FUNCTIONING IN THE ELDERLY	06-01-90	05-31-91	KAISER FOUNDATION RESEARCH INSTITUTE	217,739
5 R01AG07438-04	PESTRONK, ALAN AGING AND THE NEURONAL CYTOSKELETON	08-01-90	07-31-91	MASHINGTON UNIVERSITY	134,189
5 R01AG07444-03	WANG, YU-HWA E GROWTH CONTROL IN AGING FIBROBLASTS	03-01-90	02-28-91	MC GILL UNIVERSITY	102,173
5 R01AG07449-02	TINETTI, MARY E INJURY AND FUNCTIONAL DECLINE IN ELDERLY FALLERS	05-01-90	04-30-91	YALE UNIVERSITY	337,577
*5 R01AG07450-02	MACIAG, THOMAS HUMAN ENDOTHELIAL CELL SENESCENCE GENES	05-01-90	04-30-91	AMERICAN NATIONAL RED CROSS	111,232
5 R29AG07452-03	MATT, DENNIS W REPRODUCTIVE AGING AND THE HYPOTHALAMIC-PITUITARY AXIS	08-01-90	07-31-91	VIRGINIA COMMONWEALTH UNIVERSITY	78,067

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GRANT NUMBER	PRINCIPAL INVESTIGATOR TITLE	BUDGET START	DATES END	INSTITUTION	TOTAL		
5 R01AG07459-03	LIANG, MATTHEW H DEVELOPMENT & EVALUATION OF PHYSICAL FUNCTION MEASURES	06-01-90	03-31-91	BRIGHTMAN AND WOMEN'S HOSPITAL	95,143		
5 R01AG07462-03	LEVINE, MICHAEL S DOPAMINERGIC MODULATION OF AGING STRIATUM	04-01-90	03-31-91	UNIVERSITY OF CALIFORNIA LOS ANGELES	123,536		
5 R29AG07465-02	ALDMIN, CAROLYN M PSYCHOSOCIAL FACTORS AFFECTING HEALTH AMONG OLDER MEN	08-01-90	10-01-90	BOSTON UNIVERSITY	11,685		
1 R01AG07466-01A3	PERLMUTTER, MARION AGE AND ACTIVITY EFFECTS ON ADULT COGNITION	09-01-90	08-31-91	UNIVERSITY OF MICHIGAN AT ANN ARBOR	121,377		
7 R01AG07467-04	ODKHTENS, MURAD AGING ON EFFLUX AND TURNOVER OF HEPATIC GLUTATHIONE	08-22-90	04-30-91	UNIVERSITY OF SOUTHERN CALIFORNIA	96,441		
5 R01AG07469-03	MANTON, KENNETH O ACTIVE LIFE EXPECTANCY IN OLD AND OLDEST-OLD POPULATIONS	04-01-90	03-31-91	DUKE UNIVERSITY	157,019		
5 R01AG07470-03	CHAU, VINCENT ABERRANT UBIQUITINYLATION IN AGED AND ALZHEIMER BRAIN	04-01-90	03-31-91	MAYNE STATE UNIVERSITY	126,651		
5 R01AG07472-03	DICE, JAMES F, JR DEGRADATION OF ABNORMAL PROTEINS IN SENESCENT	04-01-90	03-31-91	TUFTS UNIVERSITY	132,408		
5 R01AG07473-03	UDUPA, KODETHOOR B MICROENVIRONMENT, AGING, AND NEUTROPHIL FUNCTION	04-01-90	03-31-91	UNIVERSITY OF ARKANSAS MED SCIS LTL ROCK	71,322		
5 R01AG07476-03	LEVENSON, ROBERT W AGING AND EFFECTIVE MARITAL FUNCTIONING	04-01-90	03-31-91	UNIVERSITY OF CALIFORNIA BERKELEY	222,471		
5 R01AG07478-03	MEDLUND, PETER J AGE AND PROPRANDIOL ENANTIOMERIC KINETICS AND DYNAMICS	08-01-90	07-31-91	UNIVERSITY OF KENTUCKY	105,290		
5 R29AG07480-03	IDLER, ELLEN L EPIDEMIOLOGY OF CHRONIC PAIN AND SELF-ASSESSED HEALTH	07-01-90	06-30-91	RUTGERS THE STATE UNIV NEW BRUNSWICK	115,665		

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11-30-90	GRANT NUMBER	PRINCIPAL INVESTIGATOR TITLE	BUDGET START	DATES END	INSTITUTION	TOTAL	
	5 R01AG07508-03	HARE, JOHN E VARIATIONS IN FUNCTIONING IN AN AGING POPULATION	09-01-90	08-31-91	NEW ENGLAND MEDICAL CENTER HOSPITALS, INC	182,233	
	5 P01AG07542-04	PARFITT, A MICHAEL BONE REMODELING: AMOUNT/QUALITY OF BONE NAD FRACTURES	09-01-90	06-30-91	HENRY FORD HOSPITAL	482,196	
	5 R01AG07547-02	PERETZ, BERTRAM NEURON VIABILITY IN THE ADULT NERVOUS SYSTEM	12-01-89	11-30-90	UNIVERSITY OF KENTUCKY	106,481	
	5 R01AG07552-03	PERRY, GEORGE AMYLOID PRECURSOR IN ALZHEIMER DISEASE	04-01-90	03-31-91	CASE WESTERN RESERVE UNIVERSITY	43,344	
	5 R37AG07554-03	WILLOTT, JAMES F AGING AND CENTRAL AUDITORY SYSTEM MORPHOLOGY	05-01-90	04-30-91	NORTHERN ILLINOIS UNIVERSITY	70,067	
	5 R01AG07560-03	BARNES, DAVID M DETERMINANTS OF CELLULAR SENESENCE IN VITRO	05-01-90	04-30-91	OREGON STATE UNIVERSITY	106,865	
	5 R01AG07562-02	GANGULI, MARY EPIDEMIOLOGY OF DEMENTIA--A PROSPECTIVE COMMUNITY STUDY	01-01-90	12-31-90	UNIVERSITY OF PITTSBURGH AT PITTSBURGH	352,716	
	5 R01AG07569-02	PARASURAMAN, RAJA ATTENTION IN AGING AND EARLY ALZHEIMER'S DEMENTIA	04-01-90	03-31-91	CATHOLIC UNIVERSITY OF AMERICA	88,078	
	5 R01AG07572-03	KALU, DIKE N MODULATION OF AGING BONE LOSS BY ANABOLIC HORMONES	04-01-90	03-31-91	UNIVERSITY OF TEXAS HLTH SCI CTR SAN ANT	168,158	
	5 R01AG07584-03	KUKULL, WALTER ANTHONY GENETIC DIFFERENCES IN ALZHEIMERS CASES AND CONTROL	04-01-90	03-31-91	UNIVERSITY OF WASHINGTON	398,681	
	5 R01AG07591-03	KOZIKOWSKI, ALAN P AGENTS FOR THE TREATMENT OF MEMORY & LEARNING DISORDERS	04-01-90	03-31-91	UNIVERSITY OF PITTSBURGH AT PITTSBURGH	129,219	
	5 R01AG07592-02	BARNARD, ROY J MECHANISMS OF AGING INDUCED INSULIN RESISTANCE	01-01-90	12-31-90	UNIVERSITY OF CALIFORNIA LOS ANGELES	126,888	
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GRANT NUMBER	PRINCIPAL INVESTIGATOR TITLE	BUDGET START	DATES END	INSTITUTION	TOTAL
5 R29AG07597-03	STULL, DONALD E CARING FOR ELDERLY--IMPACT OF SOCIAL SUPPORT AND BURDEN	04-01-90	03-31-91	UNIVERSITY OF AKRON	91,376
5 R01AG07604-03	HAUSEN, ROBERT M TRENDS IN LIFE ACHIEVEMENT ACROSS THE LIFE COURSE	05-31-90	05-30-91	UNIVERSITY OF WISCONSIN MADISON	179,605
1 R01AG07607-01A2	BLANCHARD-FIELDS, FREDDA H ATTRIBUTIONAL PROCESSES IN ADULTHOOD AND AGING	04-01-90	03-31-91	LOUISIANA STATE UNIV ARM COL BATON ROUGE	86,207
5 R01AG07618-02	BEYENE, YEMOUBBAR MENOPAUSE, AGING & OSTEOPOROSIS: CROSS-CULTURAL INQUIRY	05-01-90	04-30-91	UNIVERSITY OF CALIFORNIA SAN FRANCISCO	139,679
5 R01AG07624-02	CHUI, HELENA C ALZHEIMER'S DISEASE AND CEREBRAL AMYLOID ANGIOPATHY	01-01-90	12-31-90	UNIVERSITY OF SOUTHERN CALIFORNIA	147,440
5 R01AG07631-03	BRATER, DONALD C CLINICAL PHARMACOLOGY OF NSAIDS IN THE ELDERLY	04-01-90	03-31-91	INDIANA UNIV-PURDUE UNIV AT INDIANAPOLIS	258,673
5 R37AG07637-02	HERMALIN, ALBERT I COMPARATIVE STUDY OF THE ELDERLY IN FOUR ASIAN COUNTRIES	03-01-90	02-28-91	UNIVERSITY OF MICHIGAN AT ANN ARBOR	467,890
1 R01AG07648-01A3	GOLD, PAUL E AGING AND MEMORY	05-01-90	04-30-91	UNIVERSITY OF VIRGINIA CHARLOTTESVILLE	189,441
5 R29AG07651-03	GARDER, ALAN M HEALTH ECONOMICS OF AGING	04-01-90	03-31-91	STANFORD UNIVERSITY	90,534
5 R01AG07657-03	SOHAL, RAJINDAR S CELLULAR AGING AND OXYGEN FREE RADICALS	08-01-90	07-31-91	SOUTHERN METHODIST UNIVERSITY	88,103
7 R01AG07660-04	GOLDBER, ANDREW P AEROBIC CAPACITY AND METABOLIC FUNCTION IN SENIORS	09-30-90	07-31-91	UNIVERSITY OF MARYLAND BALT PROF SCHOOL	223,652
5 P01AG07669-02	RAINWATER, LEE P COMPARATIVE LIFE COURSE RESEARCH ON ECONOMIC WELL-BEING	09-01-90	08-31-91	HARVARD UNIVERSITY	206,633

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GRANT NUMBER	PRINCIPAL INVESTIGATOR TITLE	BUDGET START	DATES END	INSTITUTION	TOTAL		
11-30-90							
5 R01AG07671-03	SCHMECHEL, DONALD E CHOLINERGIC DEFICIENCY	05-01-90	04-30-91	DUKE UNIVERSITY	163,414		
1 R29AG07676-01A2	MITTMAN, BRIAN S REACTIONS-OLDER WORKERS PROMOTION & EMPLOYMENT PROSPECTS	01-01-90	12-31-90	RAND CORPORATION	92,979		
5 R01AG07677-02	SHAFIT-ZAGARDO, BRIDGET SECOND MESSENGERS IN ASTROCYTES AND PRECURSOR CELLS	12-01-89	11-30-90	YESHIVA UNIVERSITY	148,850		
5 P01AG07687-03	SIMON, MELVIN I AGING IN THE NERVOUS SYSTEM OF TRANSGENIC MICE	05-01-90	04-30-91	CALIFORNIA INSTITUTE OF TECHNOLOGY	508,787		
5 R01AG07695-03	LAL, HARBAHS NEUROBEHAVIORAL AND IMMUNOLOGICAL MARKERS OF AGING	04-01-90	03-31-91	TEXAS COLLEGE OF OSTEOPATHIC MEDICINE	118,002		
5 R01AG07700-03	FRIEDMAN, EITAN AGING, PROTEIN KINASE C AND SEROTONIN RELEASE	04-01-90	03-31-91	MEDICAL COLLEGE OF PENNSYLVANIA	100,381		
5 R01AG07711-03	REISER, KAREN M COLLAGEN CROSSLINKS: BIOMARKERS OF AGING	04-01-90	03-31-91	UNIVERSITY OF CALIFORNIA DAVIS	92,462		
5 R01AG07719-03	MURASKO, DONNA M IMMUNE AND NEUROLOGIC PARAMETERS AS BIOMARKERS OF AGING	04-01-90	03-31-91	MEDICAL COLLEGE OF PENNSYLVANIA	142,683		
5 R01AG07723-03	GALLOP, PAUL M BIOMARKERS OF AGING--CIRCULATING-DEPOSITED OSTEOCALCIN	04-01-90	03-31-91	HARVARD UNIVERSITY	154,022		
5 R01AG07724-03	HOLF, NORMAN S CELL RENAL, SIZE, AND CLONING AS BIOMARKERS OF AGING	04-01-90	03-31-91	UNIVERSITY OF WASHINGTON	205,866		
*3 R01AG07724-03S1	HOLF, NORMAN S CELL RENAL, SIZE, AND CLONING AS BIOMARKERS OF AGING	08-01-90	03-31-91	UNIVERSITY OF WASHINGTON	1,435		
5 R01AG07732-03	DIAMOND, JACK PERIPHERAL NGF-RELATED SENSORY MARKERS OF AGING IN SKIN	04-01-90	03-31-91	MC MASTER UNIVERSITY	43,489		
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GRANT NUMBER	PRINCIPAL INVESTIGATOR TITLE	BUDGET START	DATES END	INSTITUTION	TOTAL	
3 R01AG07732-03S1	DIAMOND, JACK CMS CORRELATES OF AGE-AND MGF-RELATED SENSORY CHANGES	07-01-90	03-31-91	MC MASTER UNIVERSITY	25,249	
5 R01AG07735-03	OLTON, DAVID S BEHAVIORAL AND PHYSIOLOGICAL BIOMARKERS OF AGING	04-01-90	03-31-91	JOHNS HOPKINS UNIVERSITY	129,127	
5 R01AG07736-03	DAVIS, PAUL J CELLULAR BIOMARKERS OF AGING	04-01-90	03-31-91	STATE UNIVERSITY OF NEW YORK AT BUFFALO	127,999	
5 R01AG07739-03	BUSBEE, DAVID L DNA POLYMERASE ALPHA EXPRESSION--BIOMARKER OF AGING	04-01-90	03-31-91	TEXAS A&M AND MECH UNIV COLLEGE STATION	98,172	
5 R01AG07747-03	BROWSON, RODERICK T AGE RELATED LEGIONS AS BIOMARKERS OF AGING	04-01-90	03-31-91	TUFTS UNIVERSITY	129,806	
5 R01AG07750-03	RANDERATH, KURT DNA MODIFICATIONS--I COMPOUNDS AS BIOMARKERS OF AGING	04-01-90	03-31-91	BAYLOR COLLEGE OF MEDICINE	93,985	
5 R01AG07752-03	SONNTAG, WILLIAM E GROWTH HORMONE & GH-DEPENDENT BIOMARKERS OF AGING	04-01-90	03-31-91	WAKE FOREST UNIVERSITY	102,944	
5 R01AG07767-03	LANDFIELD, PHILIP M BIOMARKERS OF BRAIN AGING	04-01-90	03-31-91	WAKE FOREST UNIVERSITY	137,947	
5 R01AG07771-04	NORTH, WILLIAM O NEUROPEPTIDES IN CENTRAL DISORDERS; ALZHEIMER'S DISEASE	09-15-90	08-31-91	DARTMOUTH COLLEGE	149,840	
5 R01AG07772-03	GUILLEMINAULT, CHRISTIAN SLEEP, CIRCADIAN RHYTHMS, ACTIVITY, AND THE HEART	04-01-90	03-31-91	STANFORD UNIVERSITY	171,457	
5 R01AG07778-01A2	NYDEGGER, CORINNE M INTERGENERATIONAL RELATIONS IN THE BUSINESS FAMILY	02-01-90	01-31-91	UNIVERSITY OF CALIFORNIA SAN FRANCISCO	128,733	
5 R01AG07788-03	CHARLESWORTH, BRIAN MUTATIONAL VARIATION IN LIFE HISTORIES	09-01-90	08-31-91	UNIVERSITY OF CHICAGO	158,512	

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GRANT NUMBER	PRINCIPAL INVESTIGATOR TITLE	BUDGET START	DATES END	INSTITUTION	TOTAL			
11-30-90								
5 R01A007790-03	LACHMAN, MARJORIE E ENHANCING MEMORY CONTROL BELIEFS AND PERFORMANCE	08-01-90	07-31-91	BRANDEIS UNIVERSITY	48,818			
5 R01A007793-03	JAGUST, WILLIAM J LONGITUDINAL SPECT AND PET STUDIES OF DEMENTIA	07-01-90	06-30-91	UNIVERSITY OF CALIF-LAMRENC BERKELEY LAB	282,125			
5 R01A007794-02	STOLLER, ELEANOR P SELF CARE-LAY RESPONSE TO ILLNESS	05-01-90	04-30-91	COLLEGE AT PLATTSBURGH	221,181			
1 R01A007795-01A2	MILLER, MARILYN M NEUROENDOCRINE REGULATION IN THE AGING HYPOTHALAMUS	04-01-90	03-31-91	MC GILL UNIVERSITY	90,118			
5 R01A007798-03	BARTLETT, JAMES C HUMAN AGING AND FACE MEMORY	09-01-90	08-31-91	UNIVERSITY OF TEXAS DALLAS	53,499			
5 R01A007801-03	MONTGOMERY, MARK R TOXICOLOGY OF PULMONARY OXIDANT INJURY IN AGING	08-01-90	07-31-91	UNIVERSITY OF SOUTH FLORIDA	74,859			
5 R01A007802-03	DAVIS, MARADEE A EPIDEMIOLOGY OF OSTEOARTHRITIS AND DISC DEGENERATION	08-01-90	07-31-91	UNIVERSITY OF CALIFORNIA SAN FRANCISCO	161,898			
5 R01A007805-02	GRIFFITH, WILLIAM H, III PHYSIOLOGY OF CHOLINERGIC BASAL FOREBRAIN NEURONS	01-01-90	12-31-90	TEXAS A&RI AND MECH UNIV COLLEGE STATION	61,903			
1 R01A007820-01A3	MORRIS, JOHN M HIGH RISK ELDERLY AND COMMUNITY RESIDENCE	09-01-90	08-31-91	HEBREW REHABILITATION CENTER FOR AGED	246,927			
5 R37A007823-02	KAHANA, EVA F ADAPTATION TO FRAILTY AMONG DISPERSED ELDERLY	07-01-90	06-30-91	CASE WESTERN RESERVE UNIVERSITY	159,690			
5 R01A007831-02	ERSHLER, WILLIAM B CALORIE RESTRICTION AND AGING IN NON-HUMAN PRIMATES	04-01-90	03-31-91	UNIVERSITY OF WISCONSIN MADISON	194,566			
5 R29A007854-03	MITCHELL, DAVID B NORMAL AGING--EVIDENCE FOR MULTIPLE MEMORY SYSTEMS	07-01-90	06-30-91	SOUTHERN METHODIST UNIVERSITY	67,611			

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7 R29AG07855-03	PETERSON, CHRISTINE ALTERED CALCIUM HOMEOSTASIS TO DIAGNOSE ALZHEIMER'S	07-01-90	06-30-91	UNIVERSITY OF SOUTHERN CALIFORNIA	91,357
5 R29AG07857-03	POEHLMAN, ERIC T PHYSICAL ACTIVITY AND ENERGY METABOLISM IN AGING MAN	08-01-90	07-31-91	UNIVERSITY OF VERMONT & ST AGRIC COLLEGE	80,481
5 R01AG07860-03	GAUBATZ, JAMES W DNA DAMAGE DURING AGING OF POSTMITOTIC CELLS	07-01-90	06-30-91	UNIVERSITY OF SOUTH ALABAMA	83,046
5 R01AG07861-03	FELSON, DAVID T OSTEOARTHRITIS AND PHYSICAL DISABILITY IN THE ELDERLY	07-01-90	06-30-91	BOSTON UNIVERSITY	160,414
5 R01AG07866-03	CARROLL, JAMES P POSTURAL SYSTEM IN THE AGED	08-01-90	07-31-91	PENNSYLVANIA COLLEGE OF OPTOMETRY	107,036
5 R01AG07875-03	BRUCE, SARAH A CELLULAR AGING OF MESENCHYME TISSUE IN VIVO & IN VITRO	07-01-90	06-30-91	JOHNS HOPKINS UNIVERSITY	182,572
5 R01AG07886-03	HOLLAND, AUDREY L DISCOURSE AND EVERYDAY REMEMBERING	07-01-90	06-30-91	UNIVERSITY OF PITTSBURGH AT PITTSBURGH	64,206
5 R01AG07891-02	BLANKS, JANET M MECHANISMS OF RETINAL DEFECTS IN ALZHEIMERS DISEASE	05-01-90	04-30-91	ESTELLE DOHENY EYE FOUNDATION	129,123
5 R01AG07892-02	MORGAN, DAVID G CHANGES IN BRAIN ASTROCYTES WITH AGING	05-01-90	04-30-91	UNIVERSITY OF SOUTHERN CALIFORNIA	148,696
5 R01AG07895-03	ZACKS, JAMES L VISUAL PROCESSING OF FEATURES AND OBJECTS IN AGING	08-01-90	07-31-91	MICHIGAN STATE UNIVERSITY	83,897
*1 R29AG07904-01A1	WILLIAMS, DAVID R DIFFERENCES IN MORBIDITY/MORTALITY IN MID/LATE LIFE	01-01-90	12-31-90	YALE UNIVERSITY	84,438
5 R01AG07906-02	GROHON, JOHN H PHOSPHOLIPID ABNORMALITIES IN ALZHEIMER'S DISEASE	06-01-90	05-31-91	MASSACHUSETTS GENERAL HOSPITAL	140,373

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11-30-90	GRANT NUMBER	PRINCIPAL INVESTIGATOR TITLE	BUDGET START	DATES END	INSTITUTION	TOTAL	
	5 R29AG07907-04	MC AULEY, EDWARD SELF-EFFICACY COGNITION, EXERCISE, AND AGING	07-01-90	06-30-91	UNIVERSITY OF ILLINOIS URBANA-CHAMPAIGN	82,503	
	5 R35AG07909-02	FINCH, CALED E LEADERSHIP AND EXCELLENCE IN ALZHEIMER'S DISEASE	01-01-90	12-31-90	UNIVERSITY OF SOUTHERN CALIFORNIA	706,508	
	5 R35AG07911-03	SELKOE, DENNIS J LEADERSHIP AND EXCELLENCE IN ALZHEIMER'S DISEASE	08-01-90	07-31-91	BRIGHAM AND WOMEN'S HOSPITAL	856,248	
	5 R35AG07914-02	PRICE, DONALD L MOLECULAR NEUROPATHOLOGY OF AGING AND DEMENTIA	01-02-90	12-31-90	JOHNS HOPKINS UNIVERSITY	773,653	
	5 R35AG07918-02	COTMAN, CARL W NEURONAL PLASTICITY VERSUS PATHOLOGY IN ALZHEIMER'S	01-02-90	12-31-90	UNIVERSITY OF CALIFORNIA IRVINE	659,641	
	5 R35AG07922-03	ROSES, ALLEN D GENETICS OF LATE AND EARLY ONSET ALZHEIMER'S DISEASE	08-01-90	07-31-91	DUKE UNIVERSITY	733,955	
	5 U01AG07929-03	DEFRIESE, GORDON H SELF-CARE ASSESSMENT OF THE COMMUNITY-BASED ELDERLY	08-01-90	01-31-91	UNIVERSITY OF NORTH CAROLINA CHAPEL HILL	181,100	
	5 R29AG07933-02	ERICKSON, KENNETH R EVOKED POTENTIALS EARLY ALZHEIMERS DISEASE DETECTION	07-01-90	06-30-91	GOOD SAMARITAN HOSP & MED CTR(PRTLND,OR)	71,793	
	5 R01AG07972-02	DENHARDT, DAVID T ALTERED GENE EXPRESSION IN IMMORTAL/SENESCENT CELLS	05-01-90	04-30-91	RUTGERS THE STATE UNIV NEW BRUNSWICK	154,352	
	5 R01AG07973-02	PARNES, HERBERT S NLS RESURVEY--OLDER MALE SURVIVORS & DECEDENTS WIDOWS	12-01-89	11-30-90	OHIO STATE UNIVERSITY	774,440	
	"5 R37AG07977-08	BENGTSON, VERN L A LONGITUDINAL STUDY OF GENERATIONS AND MENTAL HEALTH	03-01-90	02-28-91	UNIVERSITY OF SOUTHERN CALIFORNIA	531,219	
	5 R01AG07985-02	GUERRIN, JABER F INSTITUTIONALIZATION & LIFE COURSE NARRATIVE IN OLD AGE	09-01-90	08-31-91	UNIVERSITY OF FLORIDA	113,576	
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1 R01AG07988-01A1	BODEN, GUENTHER NUTRITIONAL EFFECTS OF ETHANOL IN THE ELDERLY	01-01-90	12-31-90	TEMPLE UNIVERSITY	149,353
1 R29AG07991-01A2	MCDONALD, JOAN M INHIBITORY PROCESS IN SELECTIVE ATTENTION AND AGING	09-01-90	08-31-91	UNIVERSITY OF SOUTHERN CALIFORNIA	100,853
5 R01AG07992-02	WRIGHT, WOODRING E MECHANISMS OF CELLULAR IMMORTALIZATION	04-01-90	03-31-91	UNIVERSITY OF TEXAS SW MED CTR/DALLAS	186,430
5 P01AG07996-02	SEEGMILLER, J EDWIN JOINT AGING AND OSTEOARTHRITIS	12-01-89	11-30-90	UNIVERSITY OF CALIFORNIA SAN DIEGO	673,992
5 R01AG07997-03	MOROKOFF, PATRICIA J AGE, PSYCHOSEXUAL RESPONSE, AND REPRODUCTIVE HORMONES	04-01-90	03-31-91	UNIVERSITY OF RHODE ISLAND	52,781
5 R01AG07998-02	DIVENYI, PIERRE L SPEECH PERCEPTION UNDER NON-OPTIMAL CONDITIONS IN AGING	03-01-90	02-28-91	U.S. VETS ADMIN MED CTR (MARTINEZ, CA)	84,888
5 R01AG07999-02	QUANDT, SARA A NUTRITIONAL STRATEGIES & DIETARY STATUS OF RURAL ELDERLY	05-01-90	04-30-91	UNIVERSITY OF KENTUCKY	247,400
5 R01AG08010-02	BURGIO, KATHRYN L BEHAVIORAL VS. DRUG INTERVENTION--URINARY INCONTINENCE	07-01-90	06-30-91	UNIVERSITY OF PITTSBURGH AT PITTSBURGH	153,491
5 P50AG08012-03	WHITEHOUSE, PETER J UHC/CHRU ALZHEIMERS DISEASE RESEARCH CENTER	09-15-90	05-31-91	CASE WESTERN RESERVE UNIVERSITY	900,751
5 P50AG08013-03	ROSENBERG, ROGER N NEUROBIOLOGY OF ALZHEIMERS DISEASE AND AGING	09-15-90	05-31-91	UNIVERSITY OF TEXAS SW MED CTR/DALLAS	925,074
*1 P50AG08014-01A1	BECKER, ROBERT E ALZHEIMERS DISEASE CENTER CORE GRANT	08-15-90	04-30-91	SOUTHERN ILLINOIS UNIVERSITY SCH OF MED	340,274
1 P50AG08017-01A1	ZIMMERMAN, EARL A ALZHEIMER'S DISEASE CENTER CORE GRANT	07-06-90	03-31-91	OREGON HEALTH SCIENCES UNIVERSITY	507,038

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5 R01AG08102-02	GROSSMANN, ANGELIKA INTRACELLULAR CALCIUM REGULATION IN ALZHEIMER'S DISEASE	07-01-90	06-30-91	UNIVERSITY OF WASHINGTON	166,786
5 R01AG08106-02	WALSH, DAVID A INDIVIDUAL DECISION MAKING AND SUCCESSFUL AGING	08-01-90	07-31-91	UNIVERSITY OF SOUTHERN CALIFORNIA	101,475
5 R01AG08109-06	O'CONNOR, CLARE M METHYLATION OF ATYPICAL PROTEIN ASPARTYL RESIDUES	08-01-90	07-31-91	WORCESTER FOUNDATION FOR EXPER BIOLOGY	251,833
5 R01AG08117-02	CORKIN, SUZANNE M EFFECTS OF AD ON BASIC AND HIGH-ORDER SENSORY CAPACITIES	01-01-90	12-31-90	MASSACHUSETTS INSTITUTE OF TECHNOLOGY	203,756
5 R01AG08122-02	WOLF, PHILIP A EPIDEMIOLOGY OF DEMENTIA IN THE FRAMINGHAM COHORT	01-01-90	12-31-90	BOSTON UNIVERSITY	192,615
1 R01AG08131-01A2	SUTCH, RICHARD C WORK AND RETIREMENT IN THE UNITED STATES: 1900-1940	09-01-90	08-31-91	UNIVERSITY OF CALIFORNIA BERKELEY	153,682
5 R29AG08133-02	COLLIER, TIMOTHY J NOREPINEPHRINE SUPPLEMENTATION IN AGING	12-01-89	11-30-90	UNIVERSITY OF ROCHESTER	94,203
5 R29AG08134-03	ANDERSON, TRUDY B AGING COUPLES--LAST STAGE OF FAMILY LIFE	05-01-90	04-30-91	UNIVERSITY OF NORTH CAROLINA GREENSBORO	87,105
5 R01AG08145-03	RICE, DOROTHY P COSTS OF FORMAL AND INFORMAL CARE--ALZHEIMER'S PATIENTS	07-01-90	12-31-90	UNIVERSITY OF CALIFORNIA SAN FRANCISCO	141,039
5 R37AG08146-02	WISE, DAVID A PENSION PLAN PROVISIONS AND EARLY RETIREMENT	01-01-90	12-31-90	NATIONAL BUREAU OF ECONOMIC RESEARCH	109,846
5 R01AG08148-02	DOTY, RICHARD L EARLY DIAGNOSIS OF ALZHEIMER'S DISEASE & PARKINSONISM	07-01-90	06-30-91	UNIVERSITY OF PENNSYLVANIA	235,468
5 R37AG08155-02	GAMBETTI, PIERLUIGI MOLECULAR PATHOLOGY OF ALZHEIMER DISEASE	06-01-90	03-31-91	CASE WESTERN RESERVE UNIVERSITY	215,649

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1 R4JAG08161-01A1	PUTTER, JEFFREY S NOVEL AUTOMATED REHABILITATION CYCLE DEVICE	09-01-90	03-31-91	CALIFORNIA INSTITUTE OF MEDICAL RES TECH	46,708
5 R01AG08172-03	KITRELL, E MELANIE CIRCADIAN RHYTHMS AND THERMOREGULATION	06-01-90	05-31-91	UNIVERSITY OF PITTSBURGH AT PITTSBURGH	93,256
5 R01AG08173-03	PORTER, JOHN C IMPAIRED SECRETION BY AGING NEURONS	06-01-90	05-31-91	UNIVERSITY OF TEXAS SM MED CTR/DALLAS	233,312
5 R01AG08174-03	SIMPSON, EVAN R AGING AND THE REGULATION OF AROMATASE IN ADIPOSE TISSUE	06-01-90	05-31-91	UNIVERSITY OF TEXAS SM MED CTR/DALLAS	146,364
5 R01AG08175-03	MASON, JAMES I REGULATION OF ADRENAL C19 STEROID BIOSYNTHESIS	06-01-90	05-31-91	UNIVERSITY OF TEXAS SM MED CTR/DALLAS	126,239
5 R01AG08177-03	ABRAHAM, GEORGE M CLONAL B-CELL ANALYSIS IN HUMAN MONOCLONAL GAMMAPATHIES	09-01-90	08-31-91	UNIVERSITY OF ROCHESTER	169,175
5 R01AG08178-03	LEDDY, JOHN P PATHOGENESIS OF ERYTHROCYTE AUTOANTIBODY FORMATION	09-01-90	08-31-91	UNIVERSITY OF ROCHESTER	155,717
5 R01AG08179-03	ZAUDERER, MAURICE VARIABLE GENE UTILIZATION IN SPECIFIC T-CELL RESPONSES	09-01-90	08-31-91	UNIVERSITY OF ROCHESTER	110,105
5 R01AG08189-03	DAVANZO, JULIE S DEMOGRAPHIC CHANGES AND FAMILY DECISION MAKING	07-01-90	06-30-91	RAND CORPORATION	38,817
5 R01AG08191-03	SCHULZE, DAN W CHARACTERIZATION AND EXPRESSION OF IG GENE FAMILIES	09-01-90	08-31-91	UNIVERSITY OF MARYLAND BALT PROF SCHOOL	139,651
"5 R01AG08192-03	KELSOE, GARNETT H AGE'S IMMUNOLOGICAL CONSEQUENCES--ANALYSIS OF CLONES	08-01-90	07-31-91	UNIVERSITY OF MARYLAND BALT PROF SCHOOL	124,667
5 R01AG08193-03	CERNY, JAN AUTO-REACTIVE-IDIOTYPIC LYMPHOCYTE	08-01-90	07-31-91	UNIVERSITY OF MARYLAND BALT PROF SCHOOL	189,455

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5 R01AG08196-03	RIGGS, ARTHUR D X-CHROMOSOME INACTIVATION AND DNA METHYLATION	07-01-90	06-30-91	BECKMAN RESEARCH INSTITUTE/CITY OF HOPE	264,328
5 R29AG08199-03	TURKER, MITCHELL S SOMATIC MUTATION AND AGING--A MODEL SYSTEM	07-01-90	06-30-91	UNIVERSITY OF KENTUCKY	99,509
5 R01AG08200-03	ROBAKIS, NIKOLAOS K STRUCTURE & EXPRESSION OF THE B-PROTEIN-PRECURSOR GENE	08-01-90	07-31-91	MOUNT SINAI SCHOOL OF MEDICINE	163,813
5 R01AG08201-03	TERRY, ROBERT D STRUCTURE AND FUNCTION IN ALZHEIMER'S DISEASE	08-01-90	07-31-91	UNIVERSITY OF CALIFORNIA SAN DIEGO	518,915
5 R01AG08203-03	MURPHY, CLAIRE L OLFACTORY DYSFUNCTION IN ALZHEIMER'S DISEASE	08-01-90	07-31-91	SAN DIEGO STATE UNIVERSITY	27,972
5 R01AG08204-03	BUTTERS, NELSON M NEUROPATHOLOGICAL-MEMORY CORRELATES IN DAT	08-01-90	07-31-91	UNIVERSITY OF CALIFORNIA SAN DIEGO	65,271
5 R01AG08205-03	SAITOH, TSUNAO MODEL UNIFYING BIOCHEMICAL LESIONS--ALZHEIMER'S DISEASE	08-01-90	07-31-91	UNIVERSITY OF CALIFORNIA SAN DIEGO	101,642
5 R01AG08206-04	ARMSTRONG, DAVID M TRANSMITTER NEUROANATOMY IN ALZHEIMER'S DISEASE	08-01-90	07-31-91	GEORGETOWN UNIVERSITY	102,051
5 R01AG08208-03	NIXON, RALPH A MOLECULAR MECHANISMS OF LATE-ONSET NEURONAL CELL DEATH	07-01-90	06-30-91	MC LEAN HOSPITAL (BELMONT, MA)	77,137
5 R01AG08209-03	ZAIN, SAYEEDA B TRANSFECTED CELL LINES	07-01-90	06-30-91	UNIVERSITY OF ROCHESTER	194,297
5 R01AG08210-03	ST GEORGE-HYSLOP, PETER IDENTIFICATION OF THE GENE CAUSING ALZHEIMER'S DISEASE	08-01-90	06-30-91	MASSACHUSETTS GENERAL HOSPITAL	86,827
5 R01AG08214-02	KAUSLER, DONALD H AGING AND RETRIEVAL PROCESSES IN ACTIVITY/ACTION MEMORY	06-01-90	05-31-91	UNIVERSITY OF MISSOURI COLUMBIA	87,373

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5 R01AG08226-02	ABERNETHY, DARRELL R CALCIUM ANTAGONISTS, AGING, AND HYPERTENSION	06-01-90	05-31-91	ROGER WILLIAMS GENERAL HOSPITAL	167,873
5 R01AG08235-02	MULTSCH, DAVID F INDIVIDUAL DIFFERENCES IN MEMORY CHANGE IN THE AGED	08-01-90	07-31-91	UNIVERSITY OF VICTORIA	48,803
5 R01AG08240-02	SULLIVAN, MARK D DISABLING TINNITUS AND DEPRESSION IN THE ELDERLY	06-01-90	05-31-91	UNIVERSITY OF WASHINGTON	165,440
5 R01AG08245-02	VLASSARA, HELEN REGULATION OF TISSUE REMODELING IN AGING AND DIABETES	07-01-90	06-30-91	ROCKEFELLER UNIVERSITY	153,799
1 R01AG08269-01A2	BROWN, JUDITH K BEING IN CHARGE--MIDDLE AGED WOMEN CROSS-CULTURAL VIEW	09-01-90	08-31-91	OAKLAND UNIVERSITY	50,379
5 R01AG08270-02	JUSTER, F T SAVING, HEALTH, AND HEALTH AMONG OLDER AMERICANS	07-01-90	06-30-91	UNIVERSITY OF MICHIGAN AT ANN ARBOR	474,288
1 R01AG08276-01A1	SILVERMAN, MYRNA GERIATRIC ASSESSMENT--MULTICENTER CONTROLLED EVALUATION	02-01-90	01-31-91	UNIVERSITY OF PITTSBURGH AT PITTSBURGH	164,241
5 R01AG08276-01A1S1	SILVERMAN, MYRNA GERIATRIC ASSESSMENT--MULTICENTER CONTROLLED EVALUATION	09-30-90	01-31-91	UNIVERSITY OF PITTSBURGH AT PITTSBURGH	8,561
5 R01AG08278-09	NIXON, RALPH A HUMAN BRAIN PROTEOLYSIS IN AGING & ALZHEIMER'S DISEASE	08-01-90	07-31-91	MC LEAN HOSPITAL (BELMONT, MA)	284,986
1 R01AG08288-01A2	MYKLE, MAY SELF-CARE AND COMPLIANCE OF CHRONICALLY ILL AGED	09-01-90	08-31-91	CASE WESTERN RESERVE UNIVERSITY	191,054
5 R01AG08289-01A1	JOHNSON, MARK AGE-RELATED CHANGES IN CONNECTIVE TISSUE PERMEABILITY	12-01-89	11-30-90	MASSACHUSETTS INSTITUTE OF TECHNOLOGY	154,012
5 P01AG08291-02	LILLARD, LEE A SOCIAL AND ECONOMIC FUNCTIONING IN OLDER POPULATIONS	04-01-90	03-31-91	RAND CORPORATION	1,349,197

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3 P01AG08291-02S1	LILLARD, LEE A SUPPORT FOR ELDERLY PARENTS IN POOR HEALTH	06-01-90	03-31-91	RAND CORPORATION	120,559
1 R01AG08293-01A1	HUMES, LARRY E SPEECH RECOGNITION BY THE HEARING-IMPAIRED ELDERLY	05-01-90	04-30-91	INDIANA UNIVERSITY BLOOMINGTON	136,694
5 R37AG08303-02	MARTIN, GEORGE M HOMOZYGOSITY MAPPING OF THE WERNER SYNDROME LOCUS	05-01-90	04-30-91	UNIVERSITY OF WASHINGTON	210,156
1 R01AG08313-01A1	KUTAS, MARTA BRAIN POTENTIALS--ERPS--LANGUAGE, MEMORY, AND AGING	05-01-90	04-30-91	UNIVERSITY OF CALIFORNIA SAN DIEGO	145,366
1 R15AG08317-01A1	DAVIS, HASKER P IMPLICIT MEMORY IN YOUNG MIDDLE-AGED & ELDERLY	08-01-90	07-31-93	UNIVERSITY OF COLORADO AT COLORADO SPOGS	114,062
1 R01AG08319-01A2	ZARKIN, GARY A LABOR MARKET TRANSITIONS OF OLDER WORKERS	08-01-90	07-31-91	DUKE UNIVERSITY	153,278
5 P01AG08321-02	ZIRKIN, BARRY R AGING AND MALE REPRODUCTIVE TRACT STRUCTURE AND FUNCTION	05-01-90	04-30-91	JOHNS HOPKINS UNIVERSITY	613,476
5 R01AG08322-03	JOHNSON, THOMAS E MOLECULAR GENETIC SPECIFICATION OF AGING PROCESSES	08-01-90	07-31-91	UNIVERSITY OF COLORADO AT BOULDER	160,448
1 R01AG08324-01A1	EVANS, LOIS K REDUCING RESTRAINTS IN NURSING HOMES--CLINICAL TRIAL	02-01-90	01-31-91	UNIVERSITY OF PENNSYLVANIA	273,143
1 R01AG08325-01A1	KAWAS, CLAUDIA H RISK FACTORS AND EARLY SIGNS IN ALZHEIMER'S DISEASE/BLSA	05-01-90	04-30-91	JOHNS HOPKINS UNIVERSITY	237,427
"5 R01AG08327-02	KEYL, PENELOPE M EFFECTS OF ALZHEIMER'S DISEASE AND AGING ON DRIVING	06-01-90	04-30-91	JOHNS HOPKINS UNIVERSITY	177,854
5 R01AG08330-03	ELLNER, JERROLD J IMMUNOSENESCENCE AND TUBERCULOSIS IN THE ELDERLY	09-01-90	08-31-91	CASE WESTERN RESERVE UNIVERSITY	230,436

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1 R37AG08346-01A1	LILLARD, LEE A INTERGENERATIONAL TRANSFERS IN MALAYSIA	02-01-90	01-31-91	RAND CORPORATION	173,725
5 R01AG08353-02	FOX, ROBERT A AGE-RELATED CHANGES IN THE PERCEPTION OF SPEECH	07-01-90	06-30-91	OHIO STATE UNIVERSITY	85,569
5 R01AG08371-02	PETEGREW, JAY W IN VIVO METABOLISM IN ALZHEIMER'S DISEASE	05-01-90	04-30-91	UNIVERSITY OF PITTSBURGH AT PITTSBURGH	203,608
5 R01AG08375-02	AHERN, FRANK M ALCOHOL & PRESCRIPTION DRUG INTERACTION IN THE ELDERLY	01-01-90	12-31-90	PENNSYLVANIA STATE UNIVERSITY-UNIV PARK	256,024
5 R01AG08377-02	RATCHLE, MARCUS E BRAIN MICROVASCULATURE IN AGING AND DEMENTIA	05-01-90	04-30-91	WASHINGTON UNIVERSITY	211,586
1 R01AG08380-01	HANLON, JOSEPH T PHARMACY INTERVENTIONS FOR POLYPHARMACY IN THE ELDERLY	03-01-90	02-28-91	DUKE UNIVERSITY	150,496
7 R29AG08382-03	STINE, ELIZABETH A ADULT AGE DIFFERENCES IN ONLINE PROCESSING OF DISCOURSE	08-04-90	04-30-91	UNIVERSITY OF KANSAS LAWRENCE	56,126
5 R29AG08387-02	COHN, BARBARA A AGE, SEX & SURVIVAL-STABILITY OF ASSOCIATIONS	04-01-90	03-31-91	CALIFORNIA PUBLIC HEALTH FOUNDATION	80,074
2 R44AG08406-02	SCHENK, DALE B CHARACTERIZATION OF B-AMYLOID PRECURSOR FRAGMENTS IN AD	09-30-90	08-31-91	ATHENA NEUROSCIENCES, INC.	146,599
5 R01AG08415-02	ANCOLI-ISRAEL, SONIA SLEEP CONSOLIDATION IN A NURSING HOME POPULATION	05-01-90	04-30-91	UNIVERSITY OF CALIFORNIA SAN DIEGO	151,687
7 R01AG08419-02	RASKIND, MURRAY A PSYCHOPATHOLOGY OF ALZHEIMER'S-PSYCHONEUROENDOCRINOLOGY	01-01-90	12-31-90	UNIVERSITY OF WASHINGTON	153,591
5 R01AG08436-02	EINSTEIN, GILLES O PROSPECTIVE MEMORY ACROSS THE ADULT LIFESPAN	09-01-90	08-30-91	FURMAN UNIVERSITY	66,526

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GRANT NUMBER	PRINCIPAL INVESTIGATOR TITLE	BUDGET START	DATES END	INSTITUTION	TOTAL		
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5 R01AG08441-02	SCHACTER, DANIEL L AGING MEMORY	08-01-90	07-31-91	UNIVERSITY OF ARIZONA	155,015		
5 R01AG08444-02	KAY, MARGUERITE M B MEMBRANE CHANGES IN NEUROLOGIC AND AGING DISEASES	07-01-90	06-30-91	TEXAS A&I AND MECH UNIV COLLEGE STATION	111,569		
5 R01AG08459-02	SOHAL, RAJINDAR S ANTIOXIDANT ENZYMES AND AGING IN TRANSGENIC DROSOPHILA	07-01-90	06-30-91	SOUTHERN METHODIST UNIVERSITY	139,790		
5 R01AG08470-02	LANSBURY, PETER T JR AMYLOID DEPOSITION IN ALZHEIMER'S DISEASE	07-01-90	06-30-91	MASSACHUSETTS INSTITUTE OF TECHNOLOGY	144,682		
1 R01AG08476-01A1	MARTIN, JOHN E HEALTH EFFECTS OF EXERCISE IN ELDERLY HYPERTENSIVES	05-01-90	04-30-91	SAN DIEGO STATE UNIVERSITY	423,002		
5 R01AG08479-02	SONSALLA, PATRICIA K DOPAMINERGIC NEUROTOXINS AND AGING	08-01-90	07-31-91	UNIV OF MED/DENT NJ-R W JOHNSON MED SCH	123,213		
5 R01AG08481-02	RUBINSTEIN, ROBERT L MIDDLE AGED CHILD'S EXPERIENCE OF PARENTAL DEATH	09-01-90	08-31-91	PHILADELPHIA GERIATRIC CTR-FRIEDMAN HOSP	195,318		
5 R29AG08487-02	HYMAN, BRADLEY T PATHOLOGICAL ALTERATIONS IN ALZHEIMER'S DISEASE	08-01-90	07-31-91	MASSACHUSETTS GENERAL HOSPITAL	93,403		
1 R01AG08491-01A1	KRAUSE, NEAL M SOCIAL SUPPORT AMONG AGED	04-01-90	03-31-91	UNIVERSITY OF MICHIGAN AT ANN ARBOR	98,950		
5 R01AG08494-02	MEYD, CONSTANCE BIOLOGICAL FACTORS RESPONSIBLE FOR NEUROBEHAVIORAL AGING	07-01-90	06-30-91	JOHNS HOPKINS UNIVERSITY	172,265		
*1 R01AG08504-01A1	JAZWINSKI, S MICHAEL CONTROL OF PROLIFERATION IN SENESCENT YEAST CELLS	06-01-90	05-31-91	LOUISIANA STATE UNIV MED CTR NEW ORLEANS	145,951		
1 R01AG08510-01A1	BAUMGARTNER, RICHARD W BODY COMPOSITION METHODS FOR THE ELDERLY	08-15-90	05-31-91	MRIGHT STATE UNIVERSITY	98,966		
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5 R37AG08511-02	DIOKMO, ANANIAS C GERIATRIC URINARY INCONTINENCE: LONG-TERM FOLLOW-UP	07-01-90	06-30-91	UNIVERSITY OF MICHIGAN AT ANN ARBOR	322,550
5 R01AG08513-02	BOILEAU, RICHARD A FAT AND FAT-FREE BODY COMPOSITION DEVELOPMENT IN AGING	12-01-89	11-30-90	UNIVERSITY OF ILLINOIS URBANA-CHAMPAIGN	122,996
5 R01AG08514-02	GAGE, FRED H GRAFTING GENETICALLY MODIFIED CELLS TO THE BRAIN	07-01-90	06-30-91	UNIVERSITY OF CALIFORNIA SAN DIEGO	272,293
5 R01AG08521-02	MORROW, DANIEL O AGING, EXPERTISE, TEXT ORGANIZATION, AND COMPREHENSION	08-01-90	07-31-91	DECISION SYSTEMS	118,064
5 R01AG08522-02	POWELL, DONALD A ASSOCIATIVE LEARNING AND AGING	07-01-90	06-30-91	UNIVERSITY OF SOUTH CAROLINA AT COLUMBIA	39,616
1 R29AG08537-01A1	JOACHIM, CATHARINE L PLAQUE & TANGLE PATHOGENESIS IN ALZHEIMER'S DISEASE	05-01-90	04-30-91	BRIGHTMAN AND WOMEN'S HOSPITAL	94,145
5 R01AG08544-02	SHERWOOD, SYLVIA MENTAL DISORDERS AMONG DELANARE NURSING HOME PATIENTS	03-01-90	11-30-91	HEBREW REHABILITATION CENTER FOR AGED	129,245
7 R01AG08545-03	DALE, GEORGE KL STUDIES ON ERYTHROCYTE SENESCENCE	09-01-90	12-31-90	UNIVERSITY OF OKLAHOMA HLTH SCIENCES CTR	27,430
5 R01AG08549-02	BREITNER, JOHN C GENETIC EPIDEMIOLOGY ALZHEIMER DISEASE IN TWINS	09-01-90	08-31-91	DUKE UNIVERSITY	1,744,506
5 R01AG08552-02	DANIELS, CHRISTOPHER K REGULATION OF MUCOSAL IMMUNOCOMPETENCE IN THE AGING RAT	01-01-90	12-31-90	IDAH0 STATE UNIVERSITY	93,597
*1 R29AG08554-01A1	UNBERSON, DEBRA DEATH OF A PARENT--IMPACT ON ADULT CHILDREN AND FAMILIES	06-01-90	05-31-91	UNIVERSITY OF TEXAS AUSTIN	90,977
5 R01AG08562-02	WILLIAMS, PAMELA TRIAL OF EPIDURAL VERSUS GENERAL ANESTHESIA	07-01-90	06-30-91	HOSPITAL FOR SPECIAL SURGERY	97,316

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5 R29AG08568-02	FRANCIS, JOSEPH OUTCOMES OF DELIRIUM IN HOSPITALIZED ELDERLY	07-01-90	06-30-91	UNIVERSITY OF PITTSBURGH AT PITTSBURGH	82,418
5 R01AG08572-02	KIRSCHNER, DANIEL A ABNORMAL FIBROUS ASSEMBLIES OF ALZHEIMER'S DISEASE	08-01-90	07-31-91	CHILDREN'S HOSPITAL (BOSTON)	87,507
5 R01AG08573-08	BANDMAN, EVERETT IMMUNOBIOCHEMICAL STUDY OF MUSCLE MYOSIN ISOFORMS	01-01-90	12-31-90	UNIVERSITY OF CALIFORNIA DAVIS	171,887
5 R01AG08574-02	KAY, M B CELLULAR & MOLECULAR BIOLOGY OF ALTERED BAND 3	05-01-90	04-30-91	TEXAS A&M AND MECH UNIV COLLEGE STATION	58,925
1 R29AG08589-01A1	TSANG, PAMELA AGING AND PILOT TIME-SHARING PERFORMANCE	06-01-90	05-31-91	WRIGHT STATE UNIVERSITY	90,972
1 R43AG08608-01A1	SHAW, THOMAS J AUTOMATED HOME TABLET AND CAPSULE DISPENSER	05-01-90	10-31-90	CHECKMATE ENGINEERING	49,834
5 R01AG08617-02	BRENNAN, PATRICIA F SUPPORTING HOME CARE VIA A COMMUNITY COMPUTER NETWORK	09-01-90	08-31-91	CASE WESTERN RESERVE UNIVERSITY	180,829
3 R01AG08617-02S1	BRENNAN, PATRICIA F SUPPORTING HOME CARE VIA A COMMUNITY COMPUTER NETWORK	09-30-90	08-31-91	CASE WESTERN RESERVE UNIVERSITY	38,505
5 R01AG08644-02	SPITZE, GLENNA D FAMILY STRUCTURE AND INTERGENERATIONAL RELATIONS	07-01-90	06-30-91	STATE UNIVERSITY OF NEW YORK AT ALBANY	96,674
5 R01AG08651-02	WOLF, DOUGLAS A INTERGENERATIONAL FAMILIES--STRUCTURE, DYNAMICS, EXCHANGES	07-01-90	06-30-91	URBAN INSTITUTE	146,689
"5 R01AG08655-02	KOTLIKOFF, LAURENCE J CONSUMER BEHAVIOR, TRANSFERS, AND THE EXTENDED FAMILY	09-01-90	08-31-91	BOSTON UNIVERSITY	92,792
1 R01AG08659-01A1	MURASKO, DONNA M EFFECT OF AGE ON RETROVIRUS DISEASE & IMMUNOSUPPRESSION	12-01-89	11-30-90	MEDICAL COLLEGE OF PENNSYLVANIA	170,500

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GRANT NUMBER	PRINCIPAL INVESTIGATOR TITLE	BUDGET START	DATES END	INSTITUTION	TOTAL		
5 P50AG08664-02	APPEL, STANLEY H ALZHEIMER'S DISEASE RESEARCH CENTER	09-13-90	05-31-91	BAYLOR COLLEGE OF MEDICINE	661,240		
1 P30AG08665-01	COLEMAN, PAUL D ALZHEIMERS DISEASE CENTER CORE GRANT	08-15-90	04-30-91	UNIVERSITY OF ROCHESTER	257,670		
5 P50AG08671-02	YOUNG, ANNE D MICHIGAN ALZHEIMER'S DISEASE RESEARCH CENTER	09-15-90	05-31-91	UNIVERSITY OF MICHIGAN AT ANN ARBOR	941,628		
5 R29AG08674-02	ROHRER, JAMES E MENTAL ILLNESS AND OUTCOMES OF NURSING HOME CARE	05-01-90	04-30-91	UNIVERSITY OF IOWA	123,530		
5 R01AG08675-05	COHEN-MANSFIELD, JISKA MENTAL HEALTH AGITATION IN ELDERLY PERSON	07-01-90	06-30-91	HEBREW HOME OF GREATER WASHINGTON	173,693		
1 R37AG08678-01	OUSLANDER, JOSEPH G ASSESSMENT & TREATMENT OF INCONTINENCE IN NURSING HOMES	01-01-90	12-31-90	UNIVERSITY OF CALIFORNIA LOS ANGELES	214,816		
5 P50AG08702-02	SHELANSKI, MICHAEL L ALZHEIMER'S DISEASE RESEARCH CENTER	09-15-90	05-31-91	COLUMBIA UNIVERSITY NEW YORK	829,955		
3 P50AG08702-02S1	SHELANSKI, MICHAEL L ADRC-HARLEM HOSPITAL CLINICAL CORE SITE	09-15-90	05-31-91	COLUMBIA UNIVERSITY NEW YORK	167,201		
1 R37AG08707-01	HEKSLER, MARC E AUTOIMMUNE REACTIONS IN AGING	01-01-90	12-31-90	CORNELL UNIVERSITY MEDICAL CENTER	118,632		
1 R01AG08708-01	GOLDSTEIN, SAMUEL MOLECULAR GENETICS OF WERNER SYNDROME & BIOLOGICAL AGING	12-01-89	11-30-90	UNIVERSITY OF ARKANSAS MED SCIS LTL ROCK	143,374		
1 R01AG08709-01	RIMM, ALFRED A POPULATION-BASED STUDY OF U S HIP FRACTURES	01-01-90	12-31-90	MEDICAL COLLEGE OF WISCONSIN	62,735		
1 R29AG08710-01A1	ROBERTS, EUGENE L, JR AGE-RELATED CHANGES IN BRAIN METABOLIC NEUROPHYSIOLOGY	08-01-90	07-31-91	UNIVERSITY OF MIAMI	108,229		
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1 R29AG08713-01	BECK, THOMAS J STRUCTURAL ANALYSIS OF HIP BONE MINERAL IMAGE DATA	01-01-90	12-31-90	JOHNS HOPKINS UNIVERSITY	87,667
1 R29AG08718-01	SHARTZ, KENNETH P NEUROPSYCHOLOGY OF MUSIC IN AGING & ALZHEIMERS DEMENTIA	03-01-90	02-28-91	UNIVERSITY OF ROCHESTER	103,297
1 R01AG08721-01	FRANGIONE, BLAS AMYLOID ANGIOPATHY, EARLY PLAQUES, AND AGING	01-01-90	12-31-90	CORNELL UNIVERSITY MEDICAL CENTER	186,296
1 R01AG08724-01	GATZ, MARGARET J DEMENTIA IN SWEDISH THINS	02-15-90	01-31-91	UNIVERSITY OF SOUTHERN CALIFORNIA	482,509
5 R01AG08726-02	HENDRIE, HUGH C DEMENTIA SCREENING METHODS: INDIANA/NONINDIANS, MANITOBA	03-01-90	02-28-91	INDIANA UNIV-PURDUE UNIV AT INDIANAPOLIS	199,776
1 R29AG08729-01A1	LEIBSON, CYNTHIA TRENDS IN ELDERLY MORTALITY MORBIDITY & HOSPITAL USE	09-30-90	07-31-91	MAYO FOUNDATION	88,664
1 R01AG08740-01	FROST, J JAMES OPIATE RECEPTOR QUANTIFICATION IN ALZHEIMER'S DISEASE	04-01-90	03-31-91	JOHNS HOPKINS UNIVERSITY	331,767
1 R01AG08751-01	KLAIBER, EDNA P L ESTROGEN TREATMENT OF MOOD DISTURBANCES IN THE MENOPAUSE	01-01-90	12-31-90	MORCESTER FOUNDATION FOR EXPER BIOLOGY	123,351
1 P01AG08761-01	VAUPEL, JAMES W OLDEST-OLD MORTALITY--DEMOGRAPHIC MODELS AND ANALYSES	02-01-90	12-31-90	UNIVERSITY OF MINNESOTA OF MNPLS-ST PAUL	392,105
1 R01AG08768-01	SELTZER, MARSHA M AGING MOTHERS OF RETARDED ADULTS--IMPACTS OF CAREGIVING	02-01-90	01-31-91	UNIVERSITY OF WISCONSIN MADISON	159,459
"1 R29AG08776-01	CODY, DIANNA D STRENGTH DENSITY & MICROSTRUCTURE IN THE PROXIMAL FEMUR	02-01-90	01-31-91	HENRY FORD HOSPITAL	65,239
5 R01AG08794-02	DETOLEDO-MORRELL, LEYLA SYNAPTIC SUBSTRATES OF AGE-RELATED MEMORY DYSFUNCTION	06-01-90	05-31-91	RUSH-PRESBYTERIAN-ST LUKES MEDICAL CTR	144,555

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1 R01AG08796-01	DISTERHOFT, JOHN F MECHANISMS OF NIMODIPINE LEARNING ENHANCEMENT IN AGING	03-01-90	02-28-91	NORTHWESTERN UNIVERSITY	224,807
1 P01AG08802-01	KURLAND, LEONARD T EPIDEMIOLOGY OF DIMENSIA AND MICRONESIA	11-01-89	01-31-91	MAYO FOUNDATION	899,342
5 P30AG08808-02	HALTER, JEFFREY B MICHIGAN GERIATRICS RESEARCH AND TRAINING CENTER	09-01-90	08-31-91	UNIVERSITY OF MICHIGAN AT ANN ARBOR	995,850
1 P30AG08812-01	WEI, JEANNE Y CENTER OF EXCELLANCE IN GERIATRIC RESEARCH AND TRAINING	03-01-90	02-28-91	HARVARD UNIVERSITY	1,102,699
1 R01AG08816-01A1	CARSTENSEN, LAURA L SOCIAL INTERACTION IN OLD AGE	09-01-90	08-31-91	STANFORD UNIVERSITY	173,968
1 R29AG08820-01	SMITH, STANLEY D ALZHEIMER'S DISEASE--LEXICAL/SEMANTIC AND EVENT KNOWLEDGE	01-01-90	12-31-90	GOOD SAMARITAN HOSP & MED CTR(PRTLND,OR)	57,005
1 R01AG08823-01A1	FRIEDMAN, HOWARD S SOCIAL AND EMOTIONAL PREDICTORS OF HEALTH AND LONGEVITY	08-01-90	07-31-91	UNIVERSITY OF CALIFORNIA RIVERSIDE	154,771
1 R01AG08835-01	BURKE, DEBORAH M MEMORY AND LANGUAGE IN OLD AGE	02-01-90	01-31-91	POMONA COLLEGE	71,356
1 R01AG08837-01A1	HAMPSON, SARAH E OLDER PATIENTS PERSONAL MODELS OF CHRONIC DISEASE	08-01-90	07-31-91	OREGON RESEARCH INSTITUTE	177,560
1 R01AG08861-01A1	MCCLEARN, GERALD E ORIGINS OF VARIANCE IN THE OLD-OLD: OCTOGENARIAN THINS	09-01-90	08-31-91	PENNSYLVANIA STATE UNIVERSITY-UNIV PARK	293,272
*1 R01AG08882-01	EKERDT, DAVID J RETIREMENT PROCESS IN MEN	05-01-90	04-30-91	UNIVERSITY OF KANSAS COL HLTH SCI & HOSP	66,781
1 R01AG08885-01	ALTSCHULER, RICHARD A MECHANISMS OF AGE-RELATED AUDITORY SENSORY DEFICITS	03-01-90	02-28-91	UNIVERSITY OF MICHIGAN AT ANN ARBOR	306,398

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5 R01AG008886-02	ROBBINS, NORMAN MECHANISMS OF AGING AT THE NEUROMUSCULAR JUNCTION	04-01-90	03-31-91	CASE WESTERN RESERVE UNIVERSITY	181,231
5 R01AG008887-02	LASEK, RAYMOND J AGING CHANGES IN NEURONAL FUNCTION AND STRUCTURE	04-01-90	03-31-91	CASE WESTERN RESERVE UNIVERSITY	174,961
1 R43AG008889-01	CARNIGHAN, FOREST J STABILITY FORCE PLATFORM	04-01-90	12-31-90	ADVANCED MECHANICAL TECHNOLOGY, INC.	49,796
1 R43AG008893-01	CARD, JOSEFINA J DEVELOPMENT OF MICROCOMPUTER ARCHIVE OF SOCIAL RESEARCH	03-01-90	10-31-90	SOCIOMETRICS CORPORATION	50,000
1 R43AG008896-01	KELLY, RICHARD T HOME MEDICAL DEVICE DESIGN FOR THE ELDERLY	09-01-90	02-28-91	PACIFIC SCIENCE AND ENGINEERING GROUP	41,389
1 R43AG008899-01	JETTE, ALAN M AUTOMATED HEALTH CARE RECORD FOR POST-ACUTE CARE	04-01-90	03-31-91	NEW ENGLAND RESEARCH INSTITUTE, INC.	50,000
1 R43AG008901-01	KARSTEN, STEPHANIE E ESTABLISH A CAREGIVER INFORMATION SERVICE	05-01-90	11-30-90	SIRCH AND DAVIS ASSOCIATES, INC.	48,026
1 R43AG008903-01A1	WALKER, BONNIE L FIRE SAFETY CERTIFICATION SYSTEM FOR THE ELDERLY	09-01-90	02-28-91	BONNIE WALKER AND ASSOCIATES	49,960
1 R43AG008907-01	COLVIN, DAVID P LIFT SUPPORT/FALLS INTERVENTION SYSTEM FOR THE ELDERLY	05-01-90	12-31-90	TRIANGLE RESEARCH AND DEVELOPMENT CORP	49,894
5 R01AG008909-02	YAAR, MINA GROWTH REGULATION OF NORMAL & MALIGNANT KERATINOCYTES	07-01-90	06-30-91	TUFTS UNIVERSITY	147,232
1 R43AG008912-01	HILL, JAMES S FINANCIAL EFFECTS OF EXTENDED LIFE EXPECTANCIES	04-01-90	04-30-91	DIGIPLAN, INC.	50,000
1 R43AG008915-01	GANGULY, DIPANKAR AMBULATORY, NON-INVASIVE URINARY INCONTINENCE MONITOR	09-30-90	03-31-91	DIAGNOSTIC DEVICES GROUP	50,000

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11-30-90	GRANT NUMBER	PRINCIPAL INVESTIGATOR TITLE	BUDGET START	DATES END	INSTITUTION	TOTAL
	1 R43AG08916-01	NAPPI, BRUCE SOLID STATE SPHINCTER MANOMETER	05-01-90	12-31-90	FOSTER-MILLER, INC.	46,617
	5 R01AG08918-02	CHRISTIAN, JOE C HUNTINGTON DISEASE: A NEUROLOGICAL MARKER OF AGING	07-01-90	06-30-91	INDIANA UNIV-PURDUE UNIV AT INDIANAPOLIS	254,753
	5 R01AG08920-05	ROSENTHAL, NADIA A DEVELOPMENTAL CONTROL OF MYOSIN LIGHT CHAIN GENES	08-01-90	07-31-91	CHILDREN'S HOSPITAL (BOSTON)	186,532
	5 R29AG08921-02	BORENSTEIN GRAVES, AMY ALUMINUM IN THE EPIDEMIOLOGY OF ALZHEIMER'S DISEASE	09-01-90	08-31-91	BATTELLE SEATTLE RESEARCH CENTER	103,969
	5 R01AG08932-10	CAPLAN, ARNOLD I PROTEOLYCAN SYNTHESIS DURING DEVELOPMENT AND AGING	08-01-90	07-31-91	CASE WESTERN RESERVE UNIVERSITY	181,733
	1 R43AG08933-01A1	SHARKO, JUDITH M MULTI-MEDIA STAFF TRAINING FOR AGED VISUALLY IMPAIRED	08-01-90	01-31-91	JMS VISION LOSS REHABILITATION	49,115
	1 R01AG08936-01	WALFORD, ROY L MAJOR HISTOCOMPATIBILITY COMPLEX--AGING & TRANSGENIC MICE	08-01-90	07-31-91	UNIVERSITY OF CALIFORNIA LOS ANGELES	209,387
	9 P01AG08938-06	EPSTEIN, CHARLES J BIOLOGY OF DOWN SYNDROME	01-01-90	12-31-90	UNIVERSITY OF CALIFORNIA SAN FRANCISCO	750,505
	5 R01AG08945-02	HILLER, JACOB M ENDOGENOUS OPIOID SYSTEM IN AGING HUMAN & RAT CNS	09-01-90	08-31-91	NEW YORK UNIVERSITY	100,176
	1 R01AG08948-01	TERESI, JEANNE A IMPACT OF SPECIAL CARE UNITS IN NURSING HOMES	05-01-90	04-30-91	HEBREW HOME FOR THE AGED AT RIVERDALE	113,671
	1 R13AG08949-01	IQBAL, KHALID INTERNATIONAL CONFERENCE ON ALZHEIMER'S DISEASE	05-03-90	04-30-91	NEW YORK STATE CNCL FOR MTL HYGIENE PLMO	30,106
	1 R13AG08962-01	BENTLEY, DAVID M AGING IMMUNITY AND INFECTION	01-19-90	03-31-91	UNIVERSITY OF ROCHESTER	31,688
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GRANT NUMBER	PRINCIPAL INVESTIGATOR TITLE	BUDGET START	DATES END	INSTITUTION	TOTAL
1 R13AG008966-01	RICE, DOROTHY COMPRESSION OF MORBIDITY--CONFERENCE	03-01-90	02-28-91	KAISER FOUNDATION RESEARCH INSTITUTE	47,894
1 R35AG008967-01	PRUSINER, STANLEY B LEADERSHIP AND EXCELLENCE IN ALZHEIMER'S DISEASE	05-01-90	04-30-91	UNIVERSITY OF CALIFORNIA SAN FRANCISCO	826,468
5 R29AG008969-02	SPRINGER, JOE E CNS REGENERATION--EFFECTS OF NGF-RICH TRANSPLANTS	08-01-90	07-31-91	HAHNEMANN UNIVERSITY	88,172
1 R15AG008978-01	DUFFY, LAWRENCE K AGING AND ALZHEIMER AMYLOID PROTEIN CHEMISTRY	04-01-90	03-31-93	UNIVERSITY OF ALASKA FAIRBANKS	103,820
1 R01AG008991-01	VARSHAVSKY, ALEXANDER J STRESS, REPAIR, AND AGING	05-01-90	04-30-91	MASSACHUSETTS INSTITUTE OF TECHNOLOGY	229,758
1 R13AG008998-01	NAPIER, TAYVE C BASAL FOREBRAIN--ANATOMY TO FUNCTION	04-01-90	03-31-91	LOYOLA UNIVERSITY MEDICAL CENTER	14,000
1 R13AG008999-01	REESE, HAYNE W LIFE-SPAN DEVELOPMENT--MECHANISMS OF EVERYDAY COGNITION	04-01-90	03-31-91	WEST VIRGINIA UNIVERSITY	1,000
1 R01AG009000-01	ENOKA, ROGER M AGING AND TRAINING EFFECTS ON MOTOR UNITS IN EXERCISE	08-01-90	07-31-91	UNIVERSITY OF ARIZONA	138,144
1 R01AG009006-01	SIPE, JEAN D CELLULAR METABOLISM OF AMYLOID PROTEINS IN AGING	05-01-90	04-30-91	BOSTON UNIVERSITY	166,538
1 R01AG009009-01	COLE, GREGORY M METABOLISM OF ALZHEIMER AMYLOID B-PROTEIN PRECURSOR	05-02-90	04-30-91	UNIVERSITY OF CALIFORNIA SAN DIEGO	114,869
*1 R35AG009016-01	COLEMAN, PAUL D LEADERSHIP AND EXCELLENCE IN ALZHEIMER'S DISEASE	05-01-90	04-30-91	UNIVERSITY OF ROCHESTER	759,568
1 P01AG009017-01	CARP, RICHARD I SEARCH FOR A TRANSMISSIBLE AGENT IN ALZHEIMER'S DISEASE	05-01-90	04-30-91	NEW YORK STATE OFFICE OF MENTAL HEALTH	710,119

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GRANT NUMBER	PRINCIPAL INVESTIGATOR TITLE	BUDGET START	DATES END	INSTITUTION	TOTAL
1 R01AG09031-01	BINDER, LESTER I MICROTUBULE PROTEINS IN ALZHEIMER'S DISEASE	05-01-90	04-30-91	UNIVERSITY OF ALABAMA AT BIRMINGHAM	127,428
1 R29AG09055-01	SHIMAMURA, ARTHUR P AGING AND MEMORY--A NEUROPSYCHOLOGICAL ANALYSIS	05-01-90	04-30-91	UNIVERSITY OF CALIFORNIA BERKELEY	90,122
1 R15AG09059-01	OLDRIDGE, NEIL B AGING AND FUNCTIONAL OUTCOME AFTER SURGERY FOR SDH	04-01-90	03-31-93	UNIVERSITY OF WISCONSIN MILWAUKEE	99,133
1 R01AG09063-01	CONNOR, JAMES R FERRITIN AND TRANSFERRIN IN CNS AGING & DISEASE	05-01-90	04-30-91	PENNSYLVANIA STATE UNIV HERSHEY MED CTR	144,708
1 U01AG09078-01	FIATARONE, MARIA A MUSCLE STRENGTHENING INTERVENTION IN THE FRAIL ELDERLY	04-16-90	02-28-91	HEBREW REHABILITATION CENTER FOR AGED	189,137
1 U01AG09087-01	TINETTI, MARY E COMMUNITY-BASED MULTIPLE FALL RISK FACTOR INTERVENTION	04-16-90	02-28-91	YALE UNIVERSITY	275,084
1 U01AG09089-01	HORN BROOK, MARK C BEHAVIORAL APPROACH TO FALLS PREVENTION IN THE ELDERLY	04-16-90	02-28-91	KAISER FOUNDATION RESEARCH INSTITUTE	446,139
1 U01AG09095-01	BUCHNER, DAVID M HEALTH STATUS EFFECTS OF ENDURANCE & STRENGTH TRAINING	04-16-90	02-28-91	UNIVERSITY OF WASHINGTON	282,638
1 U01AG09098-01	MILLER, J PHILIP REDUCING FRAILTY AND INJURIES IN OLDER PERSONS	04-16-90	02-28-91	WASHINGTON UNIVERSITY	342,434
1 U01AG09117-01	MULROW, CYNTHIA D EFFECTS OF PHYSICAL THERAPY IN NURSING HOME RESIDENTS	04-16-90	02-28-91	UNIVERSITY OF TEXAS HLTH SCI CTR SAN ANT	287,296
1 R01AG09121-01	LANGSTON, J WILLIAM AGING AND ENVIRONMENTAL TOXINS	04-01-90	03-31-91	INSTITUTE FOR MED RES SANTA CLARA COUNTY	233,930
1 U01AG09124-01	WOLF, STEVEN L REDUCING FRAILTY IN ELDERLY--TWO EXERCISE INTERVENTIONS	04-16-90	02-28-91	EMORY UNIVERSITY	256,710

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GRANT NUMBER	PRINCIPAL INVESTIGATOR TITLE	BUDGET START	DATES END	INSTITUTION	TOTAL		
1 R01AG09127-01	REISBERG, BARRY BEHAVIORAL AND PSYCHOTIC SYMPTOMS IN ALZHEIMER'S DISEASE	05-01-90	04-30-91	NEW YORK UNIVERSITY	203,166		
1 R15AG09130-01	LIMA, SUSAN D PHONOLOGICAL RECODING AND ADULT AGING	04-01-90	03-31-92	UNIVERSITY OF WISCONSIN MILWAUKEE	83,121		
1 R01AG09140-01	MEYDANI, SIMIN N VITAMIN E AND THE AGING IMMUNE RESPONSE	05-01-90	04-30-91	TUFTS UNIVERSITY	106,901		
1 R01AG09145-01	FEDSON, DAVID S HAINTOBA INFLUENZA STUDY	03-07-90	02-28-91	UNIVERSITY OF VIRGINIA CHARLOTTESVILLE	155,881		
1 R43AG09149-01	SPEARS, BARBARA L FINANCIAL PLANNING FOR RETIREMENT	05-01-90	10-31-90	CYBER ANALYTICS, INC.	47,774		
1 R43AG09159-01A1	LYNCH, TIMOTHY J COMPUTERIZED QUALITATIVE DATA COLLECTION DEVICE	09-01-90	02-28-91	PSYCHSOFT INCORPORATED	50,000		
1 R43AG09166-01	STROMBECK, RITA D RETIREMENT INSURANCE AND MEDICARE EDUCATION	05-01-90	10-31-90	HEALTHCARE EDUCATION ASSOCIATES	39,443		
1 R43AG09167-01	TRAPNELL, GORDON R LONG TERM CARE INSURANCE--MANUAL FOR REGULATORS	05-01-90	11-30-90	ACTUARIAL RESEARCH CORPORATION	40,692		
1 R43AG09168-01	KAUFMAN, DOV B COMPUTERIZED MEDICAL RECORDS SYSTEM	09-30-90	03-31-91	SUNQUEST INFORMATION SYSTEMS, INC.	50,000		
1 R43AG09171-01	CORDELL, BARBARA L STRUCTURE/FUNCTION ALZHEIMERS DISEASE PROTEASE INHIBITOR	05-11-90	11-10-90	CALIFORNIA BIOTECHNOLOGY, INC.	50,000		
*1 R43AG09174-01	PASS, THEODORE M MODEL TO EVALUATE LONG TERM CARE INSURANCE POLICIES	05-01-90	10-31-90	PASS DATA SYSTEMS	50,000		
1 R01AG09179-01	JAGACINSKI, RICHARD J AUDITORY AIDING FOR PERCEPTUAL MOTOR DECLINE IN AGING	08-01-90	07-31-91	OHIO STATE UNIVERSITY	95,936		

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1 R01AG09198-01	TOTIN, SHELDON S PERMANENT RESIDENTIAL PLANNING BY PARENTS OF MR ADULTS	09-01-90	08-31-91	STATE UNIVERSITY OF NEW YORK AT ALBANY	141,905
1 R13AG09207-01	COE, RODNEY W MEMORY FUNCTION IN AGING AND AGING-RELATED CHANGES	08-01-90	07-31-91	ST. LOUIS UNIVERSITY	5,763
1 P01AG09215-01	TROJANOWSKI, JOHN Q MOLECULAR SUBSTRATES OF AGING AND NEURON DEATH	08-01-90	06-30-91	UNIVERSITY OF PENNSYLVANIA	628,084
1 R29AG09229-01	YANKNER, BRUCE A AMYLOID NEUROTOXICITY AND BIOLOGICAL FUNCTION	08-01-90	07-31-91	CHILDREN'S HOSPITAL (BOSTON)	106,356
1 R01AG09231-01	LOY, REBEKAH NGF RECEPTOR, MEMORY AND AGING	09-01-90	08-31-91	UNIVERSITY OF ROCHESTER	114,503
1 R01AG09235-01	NEBERT, DANIEL W OXIDATIVE STRESS CELL DEATH AND TN-AM GENE BATTERY	09-01-90	08-31-91	UNIVERSITY OF CINCINNATI	231,782
1 R13AG09245-01	KELLY, JEREMIAH F 1990 SUMMER INSTITUTE IN GERIATRIC MEDICINE	07-01-90	06-30-91	BOSTON UNIVERSITY	49,780
1 R01AG09255-01	HASHTROUDI, SHAHIN EFFECTS OF AGING ON MEMORY FOR SOURCE OF INFORMATION	08-01-90	07-31-91	GEORGE WASHINGTON UNIVERSITY	150,832
1 R01AG09265-01	CAVANAUGH, JOHN C CAREGIVER BURDEN OVER TIME--STRESS AND COPING APPROACH	09-30-90	07-31-91	BOHLMING GREEN STATE UNIV BOHLMING GREEN	118,374
1 R01AG09276-01	BAREFOOT, JOHN C GENDER AND AGE DIFFERENCES IN HOSTILITY	08-01-90	07-31-91	DUKE UNIVERSITY	132,370
"1 R01AG09278-01	WANG, YU-HWA E FIBROBLAST AGING AND PROGRAMMED CELL DEATH	09-01-90	08-31-91	MC GILL UNIVERSITY	92,738
1 R01AG09287-01	PERRY, GEORGE NEUROFIBRILLARY PATHOLOGY IN ALZHEIMER DISEASE	09-01-90	08-31-91	CASE WESTERN RESERVE UNIVERSITY	86,697

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1 R01AG09301-01	SATLIN, ANDREW SENILE CHANGES IN CIRCADIAN RHYTHMS AND BEHAVIOR	09-01-90	08-31-91	MC LEAN HOSPITAL (BELMONT, MA)	186,526
1 R01AG09302-01	READY, DONALD F A CELLULAR AND GENETIC ANALYSIS OF CELL DEATH	09-01-90	08-31-91	INDIANA UNIV-PURDUE UNIV AT INDIANAPOLIS	59,963
1 R01AG09309-01	SENGELAUB, DALE R STEROIDS AS TROPIC FACTORS--AGING NEUROMUSCULAR SYSTEM	08-01-90	07-31-91	INDIANA UNIVERSITY BLOOMINGTON	110,565
1 R13AG09316-01	BROHN, M TED GENETIC BASIS OF AGING AND LONGEVITY	07-01-90	06-30-91	GERONTOLOGICAL SOCIETY OF AMERICA	22,000
1 R01AG09320-01	GOLDGABER, DMITRY Y REGULATION OF ALZHEIMER AMYLOID PRECURSOR GENE	09-01-90	08-31-91	STATE UNIVERSITY NEW YORK STONY BROOK	142,023
1 R37AG09326-01	EDELMAN, GERALD M CONTROL OF CAM EXPRESSION IN TRANSGENIC MICE	09-01-90	08-31-91	ROCKEFELLER UNIVERSITY	289,837
1 R01AG09331-01	ALTER, GEORGE C KIN, SAVING, AND HOUSEHOLDS OF THE ELDERLY	01-01-90	12-31-90	INDIANA UNIVERSITY BLOOMINGTON	63,478
1 R01AG09333-01	MCCLEARN, GERALD E DIMENSIONS OF AGING--GENETIC AND ENVIRONMENTAL INFLUENCE	08-01-90	05-31-91	PENNSYLVANIA STATE UNIVERSITY-UNIV PARK	312,795
1 R01AG09338-01	HAYWARD, MARK D RETIREMENT FROM A LIFE-COURSE PERSPECTIVE	08-01-90	07-31-91	UNIVERSITY OF SOUTHERN CALIFORNIA	117,109
1 R29AG09344-01	LAURENCE, RENEE H PHYSICAL AND EMOTIONAL HEALTH AMONG THE ELDERLY	02-01-90	01-31-91	PHILADELPHIA GERIATRIC CTR-FRIEDMAN HOSP	81,005
1 R43AG09342-01	BECKER, DAVID S DEVELOP A CD ROM OF DATABASES ON AGING	09-01-90	02-28-91	I. S. GRUPE, INC.	50,000
1 R01AG09375-01	MC GARVEY, STEPHEN T ADIPOPOSITY INSULIN ELECTROLYTES AND SAMOAN BLOOD PRESSURE	02-09-90	01-31-91	MIRIAM HOSPITAL	233,563

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1 R43AG009376-01	WEI, CHA-MER TRANSGENIC MOUSE MODEL FOR ALZHEIMER'S DISEASE	09-01-90	02-28-91	TRANSGENIC SCIENCES, INC.	48,591	
1 R01AG009412-01	RUFF, CHRISTOPHER B EFFECTS OF AGING AND EXERCISE ON BONE MASS	05-01-90	04-30-91	JOHNS HOPKINS UNIVERSITY	93,109	
1 S15AG009495-01	ELIAS, MERRILL F SMALL INSTRUMENTATION GRANT	09-01-90	08-31-91	UNIVERSITY OF MAINE	5,000	
1 S15AG009496-01	BREED, MICHAEL D SMALL INSTRUMENTATION GRANT	09-01-90	08-31-91	UNIVERSITY OF COLORADO AT BOULDER	59,553	
1 S15AG009497-01	PERRY, NATHAN M, JR SMALL INSTRUMENTATION GRANT	09-01-90	08-31-91	UNIVERSITY OF FLORIDA	5,000	
1 S15AG009498-01	HOLLMAN, HARRY SMALL INSTRUMENTATION GRANT	09-01-90	08-31-91	HAHNEMANN UNIVERSITY	22,532	
1 S15AG009499-01	SAPIRSTEIN, VICTOR S SMALL INSTRUMENTATION PROGRAM	09-01-90	08-31-91	NATHAN S. KLINE INSTITUTE FOR PSYCH RES	12,066	
1 S15AG009500-01	LANTON, M POWELL SMALL INSTRUMENTATION PROGRAM	09-01-90	08-31-91	PHILADELPHIA GERIATRIC CTR-FRIEDMAN HOSP	16,644	
1 S15AG009501-01	HOSS, WAYNE P SMALL INSTRUMENTATION GRANT	09-01-90	08-31-91	UNIVERSITY OF TOLEDO	5,000	
1 S15AG009502-01	MAXWELL, LEO C SMALL INSTRUMENTATION GRANT	09-01-90	08-31-91	UNIVERSITY OF TEXAS HLTH SCI CTR SAN ANT	49,922	
1 S15AG009503-01	HIRSCHBERG, ERICH SMALL INSTRUMENTATION GRANT	09-01-90	08-31-91	UNIVERSITY OF MEDICINE & DENTISTRY OF NJ	42,252	
1 S15AG009504-01	HOLZEMER, WILLIAM L SMALL INSTRUMENTATION PROGRAM	09-01-90	08-31-91	UNIVERSITY OF CALIFORNIA SAN FRANCISCO	11,718	

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1 S15AG09505-01	MC DONELL, FLETCHER H SMALL INSTRUMENTATION PROGRAM	09-01-90	08-31-91	BURKE REHABILITATION CTR (WHITE PLNS, NY)	8,895
1 S15AG09506-01	EDERSOLE, JEFFREY L SMALL INSTRUMENTATION GRANT	09-01-90	08-31-91	UNIVERSITY OF TEXAS HLTH SCI CTR SAN ANT	12,550
1 S15AG09507-01	WISE, DAVID A SMALL INSTRUMENTATION GRANT	09-01-90	08-31-91	NATIONAL BUREAU OF ECONOMIC RESEARCH	6,486
1 S15AG09508-01	SIMPKINS, JAMES M SMALL INSTRUMENTATION GRANT	09-01-90	08-31-91	UNIVERSITY OF FLORIDA	10,213
1 S15AG09509-01	LEVIN, PETER J SMALL INSTRUMENTATION GRANT	09-01-90	08-31-91	UNIVERSITY OF SOUTH FLORIDA	5,000
1 S15AG09510-01	DAVIS, JOSEPH H SMALL INSTRUMENTATION GRANT	09-01-90	08-31-91	MC LEAN HOSPITAL (BELMONT, MA)	37,775
1 S15AG09511-01	BUCHANAN, CHRISTINE E SMALL INSTRUMENTATION GRANT	09-01-90	08-31-91	SOUTHERN METHODIST UNIVERSITY	5,617
1 S15AG09512-01	WAYNER, MATTHEW J SMALL INSTRUMENTATION GRANT	09-01-90	08-31-91	UNIVERSITY OF TEXAS SAN ANTONIO	6,967
1 S15AG09513-01	ELZINGA, MARSHALL SMALL INSTRUMENTATION GRANT	09-01-90	08-31-91	INSTITUTE FOR BASIC RES IN DEV DISABIL	21,945
1 S15AG09514-01	ROOSA, ROBERT A SMALL INSTRUMENTATION GRANT	09-01-90	08-31-91	MISTAR INSTITUTE OF ANATOMY AND BIOLOGY	66,261
1 S15AG09515-01	PINGS, CORNELIUS J SMALL INSTRUMENTATION GRANT	09-01-90	08-31-91	UNIVERSITY OF SOUTHERN CALIFORNIA	34,902
9 R01AG09521-04	BLAU, HELEN M ACTIVATORS OF HUMAN MUSCLE GENES	04-04-90	03-31-91	STANFORD UNIVERSITY	202,055

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1 P20A009646-01	HOGAN, DENNIS P EXPLORATORY CENTER ON AGING AND HEALTH IN RURAL AMERICA	09-25-90	08-31-91	PENNSYLVANIA STATE UNIVERSITY-UNIV PARK	246,500			
1 P20A009648-01	DEFRIESE, GORDON H HEALTH RESEARCH FOR OLDER RURAL POPULATIONS	09-25-90	08-31-91	UNIVERSITY OF NORTH CAROLINA CHAPEL HILL	246,500			
1 U01A009475-01	WOLFSON, LESLIE TRAINING BALANCE/STRENGTH OF ELDERLY--IMPROVE FUNCTION	04-16-90	02-28-91	UNIVERSITY OF CONNECTICUT HEALTH CENTER	279,580			
1 R37A009692-01	HOLINSKY, FREDRIC D PANEL ANALYSIS OF THE AGED'S USE OF HEALTH SERVICES	04-01-90	05-31-91	INDIANA UNIV-PURDUE UNIV AT INDIANAPOLIS	134,734			
9 R01A009735-09	BRADSHAW, RALPH A STRUCTURE & FUNCTION OF NERVE GROWTH FACTOR	09-01-90	08-31-91	UNIVERSITY OF CALIFORNIA IRVINE	202,656			
1 R43A009739-01	MC NEES, MICHAEL P MANAGEMENT/QUALITY CONTROL/INCONTINENCE CARE--NURSING	09-30-90	03-31-91	NORTH RIM SYSTEMS	49,933			
1 U01A009740-01	JUSTER, F THOMAS HEALTH AND RETIREMENT STUDY	09-25-90	08-31-91	UNIVERSITY OF MICHIGAN AT ANN ARBOR	693,000			
1 R01A009761-01	GAFNI, ARI LASER SPECTROSCOPY OF TRIPLET STATES IN PROTEINS	09-01-90	08-31-91	UNIVERSITY OF MICHIGAN AT ANN ARBOR	169,084			
1 R01A009778-01	PHILLIPS, PAUL D CELL AGING--GROWTH FACTOR CONTROL OF EARLY RESPONSE GENE	08-01-90	07-31-91	MEDICAL COLLEGE OF PENNSYLVANIA	121,713			
1 R37A009801-01	MILLER, RICHARD A ACTIVATION DEFECTS IN AGING T CELLS	08-01-90	07-31-91	UNIVERSITY OF MICHIGAN AT ANN ARBOR	192,108			
*1 R01A009822-01	SNOWDON, DAVID A INDEPENDENT AND DEPENDENT LIFE IN THE ELDERLY	09-01-90	08-31-91	UNIVERSITY OF KENTUCKY	183,993			
1 R43A009908-01	PARSONS, HENRY M IMPROVED REMOTE CONTROL UNITS FOR SENIORS	09-30-90	03-31-91	HUMRO INTERNATIONAL, INC.	42,511			

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1 R01AG09909-01	CAMPISI, JUDITH CELLULAR SENESENCE AND CONTROL OF GENE EXPRESSION	09-01-90	08-31-91	UNIVERSITY OF CALIFORNIA BERKELEY	202,333
1 S15AG09914-01	OAKLEY, DEBORAH J SMALL INSTRUMENTATION GRANT	09-30-90	08-31-91	UNIVERSITY OF MICHIGAN AT ANN ARBOR	6,540
1 S15AG09915-01	HORBURN, JEAN E SMALL INSTRUMENTATION GRANT	09-30-90	08-31-91	UNIVERSITY OF NORTH CAROLINA CHAPEL HILL	5,000
1 S15AG09916-01	JACOX, ADA K SMALL INSTRUMENTATION GRANT	09-30-90	08-31-91	UNIVERSITY OF MARYLAND BALT PROF SCHOOL	6,611
1 R29AG09927-01	PEACOCKE, MONICA EFFECT OF AGING--RETINOIC ACID RECEPTOR GENE EXPRESSION	09-26-90	08-31-91	NEW ENGLAND MEDICAL CENTER HOSPITALS, INC	107,078
					179,595,949

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NATIONAL INSTITUTE OF MENTAL HEALTH
PROGRAM ON ALZHEIMER'S DISEASE, RELATED
DEMENTIAS, AND MENTAL DISORDERS OF AGING

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INTRODUCTION

NATIONAL INSTITUTE OF MENTAL HEALTH

The National Institute of Mental Health (NIMH) conducts and supports a wide range of research and related activities with direct and indirect relevance to issues of aging. This includes basic research in the neurosciences and behavioral sciences, clinical research in the geriatric mental disorders, and services research related to the utilization and financing of mental health care. Clinical and research training programs as well as service demonstration programs are also supported.

In Fiscal Year 1990 the NIMH estimated budget for research, training and demonstrations directly concerned with aging was \$24,403,000. An additional \$8,225,000 was spent for basic research and research training related to issues of aging. Total NIMH direct and related expenditures for aging in FY 1990, then were \$32,658,000.

Expenditures were made in the following categories:

NIMH Expenditures in Aging, FY 1990 est. (in 000's)

	<u>Direct</u>	<u>Related</u>
Extramural Research	\$18,423	\$ 6,590
Intramural Research	5,200	-
Research Training	539	1,015
Clinical Training	<u>241</u>	<u>650</u>
	\$24,403	\$ 8,225
	\$32,658	

This report provides information on program developments in research, research training, and clinical training, and also provides information on developments in mental health services demonstrations for the elderly.

EXTRAMURAL PROGRAMS

CLINICAL RESEARCH

The Institute supports a broad spectrum of research projects in the area of clinical research. The core of the research program is to understand and address more effectively the causes, prevention, treatments, and rehabilitation of mental illness in the elderly. Special attention is paid to research in Alzheimer's disease.

Research in the geriatric mental disorders has developed into a coherent and sophisticated body of knowledge. Using the best of contemporary approaches in molecular genetics and neurobiology, investigators in Alzheimer's disease are involved in studies of chromosomal abnormalities on chromosome 21, neurobiological approaches to the development of diagnostic markers, imaging studies using PET, MRI, and electrophysiological mapping procedures and neuropsychological studies. While the treatment of the core cognitive symptoms of Alzheimer's disease remains elusive, there are some promising findings using a new cholinesterase inhibitor as well as with approaches to treatment of associated psychotic and depressive symptoms. Such studies may result in strategies that could well improve the community care of these patients and could contribute to an overall strategy for patient care in the nursing home setting. A significant aspect of care for Alzheimer's disease patients is the stress that it places on the family responsible for providing support to the patient. Investigators have highlighted the guilt, demoralization, anger, and depression associated with this burden of care and have demonstrated the immunosuppressive effect of this chronic stress.

In other areas of psychopathology research, differential markers have been identified in late onset schizophrenia and in depressive disorder. Sleep researchers have made progress in identifying potential markers for mild dementia and potential treatment for sleep problems including "sundowning" in dementia patients.

Research on acute treatment of depression in older patients has shown that treatment response to medications alone, to psychotherapy alone, or to both treatments combined, is substantial, although naturalistic follow-up has shown high rates of relapse and recurrence. Research to establish protocols for continuation and maintenance treatments are now underway.

BASIC RESEARCH

The Institute provides support for basic research in the neurosciences, behavioral sciences, and in the area of health and behavior. General program areas include biological aspects of behavior; molecular biology; neurobiology; psychopharmacology; cognitive processes; personality, emotion, and psychosocial processes; factors influencing behavioral development and modification; biological, psychological, and psychosocial aspects of stress and other psychological states; behavioral aspects of stress and other psychological states; behavioral medicine, psychoimmunology; and research on Acquired Immunodeficiency Syndrome (AIDS).

SERVICES RESEARCH AND DEMONSTRATIONS

The Institute, in Fiscal Year 1990, expanded its support for services research and research training programs that is contributing to the enhancement of the scientific knowledge base on the organization, financing and delivery of mental health services to the aging. Three major grant studies were in progress which examined various aspects of the functioning of psychiatric hospitals and psychiatric units exempt from the Diagnosis-Related Group (DRG) payment system in the Medicare program, including the development of an advanced mathematical/statistical model that could generate a prospective payment classification system for such facilities. Two other Medicare-related studies have been examining the effects of Medicare's DRG and TEFRA payment systems on elderly patients hospitalized with a primary diagnosis of unipolar depressive disorder, and resource use under the New Jersey psychiatric DRG reimbursement system (see RESEARCH HIGHLIGHTS). Work neared completion on the development of a Resource-Based Relative Value Scale for possible use in reimbursing psychiatrists for services provided under the Medicare Part B program. Mental health services research studies were being conducted in such areas as geriatric co-morbidity, mental and behavioral problems in nursing homes, and the cost-effectiveness of a psychiatric liaison intervention for elderly hip fracture patients. A Research Scientist Award was provided to Dr. Thomas McGuire, Professor, Department of Economics, Boston University, that will enable him to expand his research contributions to the policy analysis on the development of the prospective and TEFRA payment systems under Medicare.

A newly-funded Center for Rural Mental Health Care Research at the Department of Psychiatry, University of Arkansas for Medical Sciences, includes research on the mental disorders of the elderly as one of three areas of study. Researchers at the State Department of Mental Health/Retardation, Augusta, Maine, are conducting a study examining the long-term outcome of patients discharged from State mental hospitals in Maine and Vermont. This 30-year follow-up study which includes an assessment of the life course of mental illness in this population as they age. A services research training grant located at the Department of Sociology, Rutgers University, which is integrated with the Institute for Health, Health Care Policy, and Aging Research, and the NIMH-funded Center for the Study of Severe Mental Illness, is studying how elderly caregivers manage the care of mentally ill persons. A newly-funded services research training grant at the School of Social Work, Columbia University, has as one of its objectives the training of social work researchers to conduct studies of special populations of the mentally ill, including the elderly.

Sixteen demonstrations of innovative models of community-based mental health services for the elderly have been supported by the Institute through grant awards to State Departments of Mental Health will terminate by December 31, 1990. The Institute plans to include the results of these demonstrations in a monograph scheduled for completion by September 1991.

RESEARCH TRAINING

National Research Service Awards, including individual fellowships and institutional awards at the predoctoral or postdoctoral levels, provide support for the training of research scientists in the area of mental health and aging. The major orientation is toward postdoctoral training in departments and institutions with major research programs in mental health and aging. In particular, program emphasis in FY 1990 was to establish research training programs for basic and clinical scientists at each of the NIMH supported Clinical Research Centers on Psychopathology of the Elderly.

CLINICAL TRAINING

In FY 1988 the NIMH established a new program, the Clinical Faculty Scholar award, to support the development of clinician scholar/investigators about to launch academic careers. This program was continued in FY 1990 and a program of institutional awards to support stipends for trainees was initiated in each of the core mental health disciplines.

INTRAMURAL PROGRAMS

The NIMH intramural scientists are continuing to build a base of knowledge about the biological, psychological, cognitive and affective changes that occur through the aging process. A summary of the investigations now being conducted in the Unit on Geriatric Psychopharmacology, Laboratory of Clinical Science (LCS), and the research highlights from other intramural laboratories which relate directly to aging and Alzheimer's Disease are presented.

UNIT ON GERIATRIC PSYCHOPHARMACOLOGY

Developing and testing pharmacological challenge paradigms with older patients and controls remains the primary focus of the unit on Geriatric Psychopharmacology, LCS. As in previous years, the unit continues to concentrate on improving the clinical diagnostic accuracy and phenomenological description of Alzheimer's disease by developing and testing new rating instruments.

The accomplishments of the NIMH intramural program's Unit on Geriatric Psychopharmacology in the Laboratory of Clinical Science include: 1) the elucidation of nicotinic mechanisms in Alzheimer's disease; 2) an investigation of serotonergic abnormalities in patients with Alzheimer's disease and individuals with depression; and 3) the development of a new scale to assess mood disorders in demented patients.

The assessment program has had a number of notable accomplishments including the development of the Dementia Mood Assessment Scale and the Clock Drawing Task. The work on the scale development is of enormous benefit to the field. Assessing the severity of depression in demented patients has proven quite difficult. Only the Cornell Scale stands as an alternative to the Dementia Mood Assessment Scale.

However, the greatest contributions of this unit have been reflected in the pharmacological studies. A series of substantial accomplishments has developed from this work including: 1) further characterization of the scopolamine model of dementia, with the suggestion that patients with Alzheimer's disease are exquisitely sensitive to the dementing properties of scopolamine; 2) the ability to enhance cognitive function with the infusion of nicotine; c) the reversal of scopolamine dementia by TRH; d) some efficacy for deprenyl in the treatment of Alzheimer's disease in neuropsychological spheres that are not affected by cholinergic agents; e) initiation of combined studies with cholinergic and non-cholinergic drugs; and f) near completion of a study of the chronic effects of deprenyl in Alzheimer's disease.

These studies have been in the forefront of Alzheimer's research. The work logically stems from previous studies in this laboratory as well as taking advantage of work conducted in the rest of the field.

Scopolamine

The main focus over the last year of the research program of the NIMH intramural Unit on Geriatric Psychopharmacology in the Laboratory of Clinical Science has been the use of pharmacologic agents in innovative therapeutic and drug challenge studies. This approach is based on the desperate need for new therapeutic approaches for Alzheimer's disease. The Unit has continued its studies of the cognitive and behavioral effects of the anticholinergic agent, scopolamine and has attempted to better understand its anti-memory effects. By combining scopolamine with the tripeptide, thyrotropin-releasing hormone (TRH) or the stimulant, amphetamine, it is becoming possible to dissect the various components of this pharmacologic challenge approach. A significant portion of scopolamine's amnesic effect can be reversed with these drugs, demonstrating that non-cholinergic processes are involved in memory and cognition. This is the first time that a classical neurotransmitter system (cholinergic) has been demonstrated to be modulated by a peptidergic drug (i.e., TRH) in human memory function. These findings are being pursued in a new generation of challenge studies which will help to further clarify pharmacologic aspects of memory and behavior.

L-deprenyl

The NIMH intramural scientists in the Unit on Geriatric Psychopharmacology are developing new strategies in therapeutic drug trials for Alzheimer's patients. Building on the Unit's previous work which showed that the monoamine oxidase inhibitor, L-deprenyl, was helpful in the symptomatic treatment of this disorder, investigations are underway to evaluate the possible neuro-protective effects of L-deprenyl in Alzheimer's patients using long-term trials of the drug. In an effort to expand the horizon of dementia therapies, the approach of combining different pharmacologic agents (e.g. physostigmine with L-deprenyl) in a single therapeutic trial is now being developed by the Unit on Geriatric Psychopharmacology and being used in studies. Such approaches may prove to be the dominant therapeutic strategy in Alzheimer's disease for the 1990s, and the NIMH intramural program is leading the way in this area.

Cognitive Studies

The Cognitive Studies Unit in the NIMH intramural Laboratory of Clinical Science was established in November, 1989, to investigate cognitive functioning in patients with neurologic and neuropsychiatric disorders. Specially designed, non-invasive procedures are used to identify patterns of cognitive deficit, to provide tools for accurately assessing cognitive change after pharmacologic intervention, and, most importantly, to test and develop models of normal cognitive functioning based on how such functions and systems break down following brain damage and disease.

The Unit is currently researching the nature of the object naming and spatial processing deficits commonly seen in patients with Alzheimer's disease. These studies will determine the extent to which these problems represent an actual loss of knowledge and skill versus impaired access to relatively intact stores of information. Also under investigation is the question of whether normal learning of different types of information can be demonstrated in these patients using procedures that do not require conscious awareness of the learning event, and the relation between this type of learning and clinically-relevant cognitive deficits. Additional studies focus on patterns of attention and memory dysfunction in Alzheimer's patients and elderly depressed individuals.

Human Cell Culture Model

In a new project in the NIMH intramural program, Laboratory of Clinical Science investigators are working to develop a human cell culture model suitable for studying Alzheimer's disease and other neuropsychiatric disorders. Cultures of proliferating human olfactory neurons have been established using brain tissue obtained at autopsy. The anatomic and functional characteristics of these cells are under investigation, and a clinical protocol has now been approved to obtain tissue for these cultures from live patients.

RESEARCH HIGHLIGHTS FROM OTHER INTRAMURAL LABORATORIES/BRANCHES

Intramural scientists are using sophisticated imaging techniques and animal models as well as new classes of drugs and are continuing to build a base of knowledge about diseases afflicting the aged.

Galanin

In the Clinical Neuroscience Branch, NIMH Intramural Program, one group of scientists is finding that neuropeptide modulators of brain cholinergic neuronal activity can affect experimentally-induced memory impairment in animals and humans. Neuropeptides are short chains of amino acids believed to fine-tune the action of major brain chemical messengers or classical neurotransmitters. The research team employs animal models to test potential new drugs that affect classical neurotransmitter function by targeting particular neuropeptide systems. This strategy holds promise for new, more selective classes of drugs than are now available for treating illnesses such as Alzheimer's disease.

These studies focus on galanin, a peptide that coexists with acetylcholine in neurons that mediate memory processing. Using an animal model of Alzheimer's disease, the research team found that while acetylcholine improves the maze-running performance of rats whose memory systems are chemically impaired, this beneficial effect of acetylcholine can be inhibited by galanin. This work suggests that a drug that antagonizes galanin might help Alzheimer's patients, whose acetylcholine systems are similarly impaired. This laboratory is among several that are testing effects of potential galanin antagonists on memory tasks in animal models of dementia.

Somatostatin

The NIMH intramural Biological Psychiatry Branch (BPB) is continuing studies of somatostatin in relation to neuropsychiatric disorders. Some of their findings show that somatostatin is low in Alzheimer's Disease and is significantly correlated with measures of both depression and cognitive impairment in these patients. Low CSF somatostatin also has been linked to indices of cortisol hypersecretion.

Thalamic Control of Ascending Information Flow

Investigators in the NIMH intramural Laboratory of Neurophysiology continue the study, mainly in rodents, of the circuitry of the reticular complex of the thalamus. The reticular complex of nuclei is thought to play a role in the regulation of information ascending to the cerebral cortex of all mammals. Accordingly, it is likely to be important in regulation of sleep-wakefulness cycles and levels of arousal, as well as in the mechanisms underlying selective attention. The investigators have found that the inputs to the reticular nucleus from the basal nucleus of Meynert are both GABAergic and cholinergic. These reticular nucleus neurons are themselves GABAergic and inhibit the main-relay nuclei of the thalamus, the cells that send information directly to the cerebral cortex. Thus, the circuit uncovered could be part of a disinhibitory pathway that enhances information flow from subcortical structures to the cerebral cortex. Dysfunction of this system would decrease the amount of information available to the cortex and thus could contribute to disorders of sleep, attention, perception, and memory, including Alzheimer's disease, in which the basal nucleus of Meynert has been implicated.

Cerebral Dysfunction in Aged Monkeys

The NIMH intramural investigators in the Laboratory of Neuropsychology, in conjunction with experimental manipulations of the basal forebrain cholinergic system, the goal of which is a better understanding of the nature and neurobiological basis of the cognitive losses associated with Alzheimer's disease, have begun to examine the cognitive losses associated with normal aging in the monkey. The initial results demonstrated a moderate but systematic decline in the recognition memory of monkeys from early adulthood (3-6 years), through middle age (14-17 years), to old age (26-30 years), as well as an age-related impairment in the type of spatial memory measured by the classical delayed response test. Since there was no correlation between the object recognition and spatial memory deficits in the aged animals, and since the two abilities are known to depend on largely different neural substrates, it is likely that multiple neural systems are vulnerable to the effects of aging and that the vulnerabilities differ from animal to animal. In the future the investigators plan to test this hypothesis directly by microscopic examination of the tissues in question.

AAEP

The NIMH intramural Laboratory of Biochemical Genetics (LBG) in collaboration with Mt. Sinai Medical School has observed a diminished translation efficiency of Alzheimer's disease brain polysomes. The investigators also have found protein differences in the brains of rats lesioned unilaterally by administration of NMDA into the rostral and caudal aspects of the nucleus basalis. With this technique they found a 2-fold increase of Alzheimer Amyloid Precursor Protein (AAPP) in the cerebral cortex on the lesioned side of the rat brain as compared to the nonlesioned side of the same. The overall protein synthesis remained unchanged and glial fibrillary acidic protein synthesis was unaffected (marker for nonspecific brain trauma). The investigators are continuing to work with collaborators on this exciting animal model.

DHHS COUNCIL ON ALZHEIMER'S DISEASE

The DHHS Council on Alzheimer's Disease is essentially the former DHHS Secretary's Task Force on Alzheimer's Disease renamed. The Council was established by the Alzheimer's Disease and Related Dementias Services Research Act of 1986 (Title IX of Public Law 99-660). Key functions of the Council include identifying promising areas of Alzheimer's disease research, coordinating this research, sharing information, and facilitating the translation of the research into practice. The Council is chaired by the Assistant Secretary for Health. Other membership consists of: the Surgeon General; the Assistant Secretary for Health Planning and Evaluation; the Commissioner of the Administration on Aging; the Administrator of the Agency for Health Care Policy and Research (AHCPR); the Directors of the National Institute on Aging (NIA), National Institute of Mental Health (NIMH), National Institute of Neurological Disorders and Stroke (NINDS), National Institute of Allergy and Infectious Diseases (NIAID) and National Center for Nursing Research (NCNR); and representatives of the Department of Veterans Affairs (VA), Health Care Financing Administration (HCFA), Health Resources and Services Administration (HRSA), and National Center for Health Statistics (NCHS).

The Council meets twice annually, and is required to submit an annual report to Congress and to the public detailing the plans of four member agencies (NIA, NIMH, AHCPR, and HCFA) regarding research on services for dementia patients and their families. Prior reports, which have been submitted in January of each year since 1988, have also detailed progress in federally sponsored Alzheimer research supported by all member agencies of the

Council. The Council met most recently in September 1990 to discuss the draft of the next report/update of plans. The NIMH plan in this regard was mandated to provide for research concerning: a) mental health services and treatment modalities relevant to mental, behavioral and psychological problems associated with Alzheimer's disease; b) methods for providing comprehensive multidimensional assessments; c) the optimal range and cost-effectiveness of community and institutional services; d) the efficacy of special care units; e) methods of combining the services of health care professionals with informal support services provided by family and friends; f) interventions to reduce the psychological, social and physical problems of caregiving family members; and g) methods of improving service delivery.

On behalf of the Council, its support staff from MDARB in 1990 also assembled and distributed a detailed compilation of all the research projects, demonstrations and other activities on Alzheimer's disease and related dementias that are currently funded by its member agencies as of January 1, 1990.

DHHS ADVISORY PANEL ON ALZHEIMER'S DISEASE

The DHHS Advisory Panel on Alzheimer's Disease was established by Title IX of Public Law 99-660 ("Alzheimer's Disease and Related Dementias Services Research Act of 1986") to assist the DHHS Secretary and DHHS Council on Alzheimer's Disease in identifying priorities and emerging issues regarding Alzheimer's disease and related dementias, and the care of afflicted individuals. The Panel is composed of 15 non-federal appointees who are prominent researchers or other experts on Alzheimer's disease, and five members of the DHHS Council (including the NIMH Director) who serve ex officio. Members serve for the four-year life legislated for the Panel (FY88-91).

The Panel is mandated to center its advice on emerging issues and promising initiatives, or research directions, in four areas related to Alzheimer's disease: a) biomedical research; b) research on services for Alzheimer's patients and their families; c) home and community based service provision systems; d) financing of health care and social services. The Panel is required to prepare annual reports (transmitted to Congress, the Secretary of HHS, the DHHS Council on Alzheimer's Disease, and the public) giving recommendations for administrative and legislative actions to improve services and provide for promising biomedical research.

The Panel issued its first annual report in 1989, and has met on three subsequent occasions in 1989 and 1990 to work on future reports. Its second report, which will be issued late in 1990, will include an update on topics covered in the first report, such as biomedical and services-oriented Alzheimer research, financing of care, and eligibility for services, and will address the specific topic of personnel and training issues in the care of Alzheimer victims. During 1991, the Panel plans to issue a special report dealing with ethnic minority and crosscultural issues in Alzheimer's disease, and in its third annual report to discuss problems of values and goals in the care of Alzheimer patients. The Panel may also sponsor a conference or public forum dealing with these latter issues. In November 1990, members of the Panel presented the ideas in the second report at the annual meeting of the Gerontological Society of America (as was done with the initial report a year earlier), and engaged that professional audience in discussion of its recommendations. In May 1991, a similar symposium will be conducted as part of the joint annual meeting of the American Geriatrics Society/American Federation on Aging Research.

The \$100,000 per annum that was authorized for Panel activities by P.L. 99-660 came from a tap on appropriate DHHS agencies, including NIMH, in FY88 and FY89, and has been requested as part of the NIMH budget for FY90 and FY91. A staff member from the Mental Disorders of the Aging Research Branch (MDARB), Division of Clinical Research, NIMH, serves as Deputy Executive Secretary of both the Council and Panel, with additional staff support provided by the Branch. MDARB and NIMH thus play a pivotal role in these high-priority, high-visibility activities of the Department.

NEUROLOGICAL RESEARCH HIGHLIGHTS

Imaging

Imaging studies refer to research utilizing positron emission tomographic (PET), magnetic resonance imaging (MRI), and computer-analyzed electroencephalography (e.g., electro-physiological mapping procedures). This new technology is being used in the exploration of diagnostic markers of a number of late-life mental illnesses, as well as tracking brain changes that may result from treatment.

Gary Small, at the UCLA Neuropsychiatric Institute (MH46424 FIRST award), is utilizing PET scanning technology to test his hypothesis that persons with Age-Associated Memory Impairment (AAMI), who have one or more first-degree relatives with clinically diagnosed or neuropathologically confirmed Alzheimer's Disease (AD), will show a high frequency of atypical brain glucose metabolic patterns. These AAMI relatives should be discernable from age-matched elderly without AAMI, and negative for a family history for AD. Other potentially discriminating ratios and patterns (e.g., parietal/sensorimotor, hemispheric asymmetry, local metabolic rates) are also being examined.

Andrew Leuchter, University of California, Los Angeles (MH40705) has developed computer-analyzed electroencephalography (CEEG) more fully as a tool for differential diagnosis of dementia, and is also establishing links between brain functional abnormalities seen on CEEG and structural lesions seen on MRI scans. Leuchter has found that there are age-specific EEG changes that need to be considered in differential diagnosis. Specifically, changes in frequency in the temporal regions are powerful discriminators between relatively younger demented and normal subjects (60-75 years), but changes in posterior head regions appear to be the most potent discriminators among older subjects (75 to 90 years). By using age-corrected CEEG techniques, Leuchter has been able to discriminate between AD, multi-infarct dementia, and normal subjects at an 85% accuracy rate. With regard to the linkages between CEEG and MRI, he has identified an electrophysiological marker--decreases in absolute slow-wave power, with concomitant increases in relative slow-wave power in the cortex overlying the lesion-- for functionally significant deep white-matter ischemic disease that appears on MRI.

Peter Rabins, of Johns Hopkins University (MH 40843), is using MRI scans and neuropsychological evaluations to discern possible differences among elderly who have either a major depression, Alzheimer's disease, or are normal. Specifically, he will examine whether 1) depressives have more cortical as well as subcortical abnormalities compared to normals, but less than AD patients; 2) clinical variables in depressives (activities of daily living, neuropsychological performance, response to depression treatment) correlate with MRI changes; and 3) MRI lesions are prognostic for depressed patients. It is expected that increased lesions will be associated with relapse and the development of AD and functional impairment. In addition, Dr. Rabins is further characterizing language disorder of the dementia syndrome, and is correlating it with basal ganglia lesions, left temporal lobe volume, and left superior temporal gyrus volume.

Mony de Leon, at New York University Medical Center (MH43965), using a special negative angle protocol in computerized axial tomography (CT) and MRI studies of normal elderly and Alzheimer's disease patients, has found hippocampal atrophy very early in the AD course. Once AD is clinically evident, longitudinal PET and CT assessment has indicated lateral temporal lobe degeneration. Moreover, in AD patients *in vivo* hippocampal atrophy, hypothalamic-pituitary-adrenal (HPA) axis dysregulation, and PET glucose utilization deficits have been found. Because a reduction in brain microvessel glucose uptake has been found postmortem, Dr. de Leon has proposed a "brain glucose starvation hypothesis" in the pathogenesis of AD that is related to hippocampal dysfunction. Dr. de Leon is attempting to use PET to extend the CT and MRI finding that the hippocampal change is among the earliest brain changes in AD.

At the Duke University Clinical Research Center (MH40159), Edward Coffey is comparing MRI structural brain measures (volume, cortical atrophy, T2 signal intensity in the pons, subcortical white matter, and deep gray nuclei), and computerized EEG parameters among normal elderly, and depressed elderly referred for electroconvulsive therapy (ECT). Dr. Coffey found pre-ECT depressed elderly to have more frequent and severe MRI brain abnormalities than normals (cortical atrophy, periventricular hyperintensities, basal ganglia/thalamic lesions), including EEG abnormalities that appear correlated with lesions of subcortical gray matter. He has also found that late-onset depressives in particular, had more cortical atrophy. In terms of response to ECT, Dr. Coffey's preliminary analyses indicate that depressed patients with more brain abnormalities (MRI and EEG) are less responsive (maintain more depressive symptoms) to ECT. Although most elderly depressed patients respond to ECT, cortical atrophy that is related to delayed orientation post-ECT and lesions of the basal ganglia (such as caudate atrophy), may be related to the development of interictal delirium in ECT treatment. Diffuse cortical and/or subcortical lesions in depression may disrupt neurotransmitter pathways and thus produce "neurochemical disconnection syndrome" with resultant affective and cognitive disturbances. Subcortical brain changes appear to be associated with less melancholia and more dementia symptoms in elderly depressed patients. Moreover, short REM latency in depression (see Reynolds, under Sleep) may be associated with lesions of the pons.

Molecular Genetics and Molecular Biology

The search for a cause of Alzheimer's disease has become increasingly critical. Genes today comprise the only etiologic factor successfully identified, and thus provide a critical clue to uncovering the mystery of this disease. In his earlier research (MH43240), Dr. Leonard Heston at the University of Minnesota, discovered a remarkable etiologic clue to Alzheimer's disease in the form of an association with Down's Syndrome: he found that all individuals with Down's achieving 40 years of age develop the neuropathology of AD, with similarities extending to light and electron microscopic changes, enzymatic changes and the anatomical distribution of lesions. A second link between these two conditions has also been confirmed in Heston's epidemiologic work, wherein a significant excess of Down's syndrome births were found in families identified because of a case of Alzheimer's disease. Heston has hypothesized that the excess gene product present in Down's, because of the trisomic chromosome 21, must be a first suspect for causing pathology in Down's, and by extension, a DNA sequence on 21 could be associated with AD in disomic individuals.

A small subset of persons with AD have families in whom approximately 50 percent of individuals in each generation develop AD, and these "familial AD" victims have been found to have an abnormal gene on 21. Because the gene for the precursor of the abnormal amyloid protein found in brain plaques in AD was also shown to reside on chromosome 21, the hypothesis evolved that the over-expression of this amyloid protein gene predisposed individuals to Alzheimer's disease. However, further restriction fragment length polymorphism (RFLP) linkage analysis has indicated that the amyloid gene is not linked to the locus for familial AD, indicating that the amyloid protein is probably not responsible for the AD syndrome but is incidental to the disease process. Gary Dean, at the University of Cincinnati (MH43506), is currently identifying the proteins and is cloning the corresponding mRNAs of the other molecular structure found in AD brains, namely the paired helical filaments (PHF). Such work will lead to better elucidation of the PHF and their origins.

George Zubenko of the University of Pittsburgh (MH43261 and Research Scientist Development Award MH00540) has continued to extend and clarify his initial findings of a blood platelet abnormality, namely, increased membrane fluidity, in Alzheimer's disease patients. He has evidence that this membrane abnormality identifies a subgroup of patients with distinct clinical features--including an earlier symptomatic onset, a more rapidly progressive decline, and greater likelihood of a family history of dementia--and that it appears to be a stable, familial trait vertically transmitted in families through inheritance of a highly-penetrant autosomal gene. Most recently, Zubenko has discovered that the genetic locus (called PMF) for this trait may

reside on the long-arm of chromosome 21, where several other genes related to the biology of Alzheimer's disease have previously been localized. He is now beginning to do a linkage analysis study to determine whether the PMP locus does definitively map on this region of chromosome 21 and whether it is distinct from the genes for familial Alzheimer's disease and the amyloid precursor protein, or may be located more closely with a region associated with the development of Down's syndrome. This work is progressing rapidly, and has exciting potential both for clarifying the etiology of Alzheimer's disease and for yielding a biological marker useful in the diagnostic identification of a particular subtype of the disease.

At Albert Einstein College of Medicine, Dr. Peter Davies (MH38623) has discovered an abnormal protein called A-68 in the brains of patients with Alzheimer's disease; this discovery may illuminate the origins of the disease and ultimately lead to a clinically useful diagnostic test for the disorder. Using a monoclonal antibody that he developed (known as ALZ-50) to proteins that are unique to cholinergic nerve cells, Dr. Davies found that the antibody identifies the abnormal AD-associated protein in the temporal and frontal brain cortex of 85 percent of AD patients, whereas the protein is not correlated with severity of clinical dementia, neuritic plaques, or old age per se. Research to determine whether the protein can be reliably assessed in the blood or cerebrospinal fluid of living patients is continuing. Recently, the protein was reported to be present in cerebrospinal fluid of some AD patients, and to be transiently expressed very early during the course of human brain development. Dr. Davies is currently producing both polyclonal and monoclonal antibodies that will be used in the assay of the cerebrospinal fluid to increase sensitivity and specificity of the test.

Other important leads associated with pathogenesis of Alzheimer's disease have emerged from the work of Dr. Carol Miller of the University of Southern California (MH39145), who has applied monoclonal antibody and DNA technologies to CNS tissue obtained from Alzheimer's disease patients at autopsy. She has identified different localized networks or subpopulations of neurons which are differentially affected in AD. Moreover, her results reveal the unfolding of a systematic time course of immunocytochemical changes in the CNS tissues patients dying from one to sixteen years post diagnosis.

Dr. Miller has also discovered the presence of selective optic nerve degeneration in AD, together with the manifestation of histologic and ultrastructural abnormalities in the retinas of patients with AD, as contrasted with age-matched controls. In all AD cases, the pathology was limited to the ganglion cell layer, with marked dropout of ganglion cells and nerve fiber layer atrophy present in the most severely affected retinas. Although the extent of retinal damage failed to correlate with the severity of AD changes in the brain, it is notable that there were no neurofibrillary tangles within the ganglion cells or neuritic plaque or amyloid angiopathy in the retina. Dr. Miller is currently exploring the neuronal-specific function of the affected neurons at three levels: clinical, histologic, and molecular. The clinical studies will focus on the visual system, integrating the neurologic and psychometric database with specific visual studies. A parallel histologic assessment of auditory system neuronal changes is being conducted. With the use of neuron-specific monoclonal probes, the architectonic differences in neuronal changes in AD will also be compared with those in other dementing diseases, such as Pick's, and Parkinson's.

At the University of Rochester Clinical Research Center (MH40381), Dr. David Felten and colleagues are among the first researchers to explore neural-immune interactions in aged rodent models, and to test preliminary hypotheses related to psychopathology in the elderly that may have an effect on immune responses. Among Dr. Felten's findings, aging associated decline in noradrenergic and peptidergic innervation has been found in secondary immune organs (e.g., spleen and lymph nodes), but not in any primary immune organs. Age related declines in the presence of striatal and dopamine neurons can be slowed appreciably by the use of the potent presynaptic D₂ receptor agonist pergolide.

At the Case Western Reserve University Center for Clinical Research (MH43444), Dr. Steven Younkin is assessing the impact of Alzheimer's disease on choline acetyltransferase (ChAT), acetylcholinesterase (AChE), ChAT mRNA, and various molecular forms of AChE and of AChE mRNA in cholinergic neurons. He is assessing the gross pathology of noradrenergic neurons in the locus ceruleus of AD patients and will examine the expected correlated changes with AD-related behavioral variables.

Schizophrenia

Late-onset schizophrenia (LOS) has received recent attention in several investigations supported by MDARB. Work by both Geoffrey Pearlson and Dilip Jeste (see below) have found common features of LOS that can be distinguished from elderly patients with early onset. These features include bizarre delusions (typically persecutory), auditory hallucinations, chronicity of illness (mean duration, 10 years) and response to relatively low neuroleptic dose (less than 200 mg CPZE in the majority). Thought disorder, inappropriate affect, and sensory deficits were not common in LOS. Moreover, history, examination, and labs revealed no evidence of any diagnosable neurological disorder. To further elucidate these differences, Dr. Pearlson of Johns Hopkins University (MH43326-02) is currently examining the structural and dopamine D2 receptor brain changes associated with LOS using MRI, CT and PET scanning, along with clinical ratings that will document the occurrence of positive and negative symptoms, and thought disorder.

Dilip Jeste, at the University of California, San Diego (MERIT award MH43693), is examining the neuropsychological, brain-imaging, and treatment response-characteristics of LOS and anticipates finding several subtypes. He predicted that one subset of patients will have significant neuropsychological deficits and structural abnormalities in MRI, and poor therapeutic response to neuroleptics with greater risk of tardive dyskinesia. Another smaller subgroup is expected to have a diagnosable dementing disorder that initially presents with schizophrenia-like clinical symptoms.

Those elderly who have suffered a chronic mental illness, such as early onset of schizophrenia, are also being studied in the MDARB program. Neuroleptic-induced tardive dyskinesia can be a significant problem in chronically mentally ill older patients for several reasons; the risk of TD increases considerably with aging, the length of neuroleptic exposure necessary to produce TD tends to be much shorter in older adults and is more likely to be severe and persistent, with far likely more adverse impact with low remission rates. In order to determine the incidence of TD in older patients, and to determine the risk factors for occurrence and precipitation of TD (including malignant TD), Dr. Jeste (MH45131-02) will assess elderly psychiatric patients over a 5-year period who have had less than 1 month of total lifetime neuroleptic exposure. After initial psychiatric and neurologic examinations, patients will be randomly assigned to one of two neuroleptic treatments-- either haloperidol or thioridazine-- and followed up with psychiatric and neurologic examinations.

Michael Davidson (MH46436-01) at the Mount Sinai School of Medicine is attempting to discern whether the dementia that appears in elderly schizophrenics shares a similar neurohistological substrate to that found in Alzheimer's or Multi-Infarct Dementia. Although the neurohistology of Alzheimer's disease is well known, the neurohistology of schizophrenia remains to be documented. Dr. Davidson and his colleagues will conduct functional and cognitive assessments antemortem in elderly schizophrenic patients and follow them until death, when their brains will be neurohistologically assessed. Insight into the etiology and neuropathology of a schizophrenic "dementia" has practical and theoretical importance. If dementia in schizophrenia shares the same histopathological substrate with Alzheimer's disease, pharmacological interventions enhancing cholinergic activity could be applied to the demented schizophrenic population. On the other hand, a "dementia" unique to schizophrenia would promote investigations of the etiology of the cognitive decline in this illness, and could be an important clue to the underlying pathogenesis of schizophrenia.

In addition to research on the clinical course of early and late onset schizophrenia, study of the relations among the social, environmental and health factors that influence utilization and success of family care and mental health services for the chronically mentally ill elderly is being undertaken.

Suzanne Weeks, at the University of Louisville (FIRST award MH44787), is following four age cohorts of middle-aged and elderly individuals with psychiatric diagnoses of schizophrenia, schizo-affective disorder, bipolar disorder, major depression, delusional disorder, or atypical psychosis over five years. Her study will attempt to determine how health and mental health services, social supports, family stressors and other factors affect adjustment (e.g., relapse) in these chronically mentally ill elderly. By identifying factors contributing to better outcome, interventions to improve the functional independence of the CMI elderly may be made.

Work by Jan Greenberg (MH46544-01) at the University of Wisconsin, explores the burdens experienced by elderly parents who care for adult children with a severe mental illness, many of whom are schizophrenic. Specifically, Dr. Greenberg is assessing the older parents' objective and subjective burdens, and is identifying potential factors associated with lower levels of burden (e.g., relatively fewer negative symptoms and unpredictable behaviors of adult schizophrenic children), and the extent to which formal services to the mentally ill adult child and the family serve as a buffer to the older parents.

Sleep, Dementia, and Depression

Although electroencephalographic (EEG) abnormalities in demented patients were first reported over 40 years ago, gross slowing of the dominant frequency proved to be a nonspecific finding and only patients with advanced dementia could be differentiated from the normal elderly using such criteria. More recently, however, Dr. Patricia Prinz at the University of Washington (MH33688) has used sleep EEG activity as a biological marker to discriminate mild dementia from normal aging and from depression. Dr. Prinz has speculated that, since many of the earliest changes in AD involve presynaptic cholinergic nerve terminals originating in the basal forebrain, the EEG may provide a sensitive approach towards assessing these early neuronal changes. She has found that the degree of dominant occipital frequency, in conjunction with measures of percent wakefulness, correctly classified 85 percent of normal aged from mildly demented subjects. Because the accuracy of formulating a differential diagnosis in the earliest stages of disease has heretofore been so poor, and has constituted a major obstacle to longitudinal studies of the course of illness, Dr. Prinz's finding represents a highly significant development in the ongoing search for reliable biological markers in AD.

In his ongoing studies of sleep in late life mental disorder, Charles F. Reynolds, III, of the University of Pittsburgh (Research Scientist Award, MH00295; and MH37869) has made a number of key observations concerning the prognostic significance of EEG sleep changes in late-life depression: a) pretreatment REM latency was significantly lower in depressed geriatric patients who would suffer recurrence compared with those who remained well during maintenance drug therapy; b) early REM sleep rebound and an antidepressant response to one night of total sleep deprivation correctly predicted in 88% of cases which patients would show a course consistent with depressive pseudodementia versus progressive dementia, with demented patients showing the lowest rate of REM activity generation; and c) two-year mortality in patients with mixed depression and cognitive impairment was correctly predicted in 77% of cases by lengthened REM latency and increased apnea-hypopnea.

Based on his observation that a "lag" in sleep recovery in the elderly may indicate a risk for future depressions, Dr. Reynolds is now conducting several longitudinal studies where he will continue to clarify the relation between persistent sleep abnormalities, pathogenesis, and illness course. One study will follow unipolar depressive patients who are currently in maintenance therapy; a second of patients with spousal bereavement or bereavement-related depression, and a third consisting of healthy elderly (who are non-depressed, non-bereaved). Analyses of these groups may indicate the interrelations among biological REM sleep abnormalities, severity of psychopathology, and disruption in social rhythms.

Up to 30% of the elderly population complains of sleep difficulties, with impaired quality of life as a frequent outcome. Charles Morin, Virginia Commonwealth University (MH47020 FIRST award), is exploring the relative effectiveness of cognitive behavior therapy, pharmacotherapy (temazepam), and the combination of cognitive behavior therapy and pharmacotherapy. Treatment outcome will be assessed in terms of sleep quality, mood, and neuropsychological functioning, and health service utilization.

Poor sleep may indeed account for the disproportionate prescription of sedative hypnotics in the elderly. Hypnotic use may lead to exacerbation of sleep apnea and daytime carryover effects such as sedation, falls, cognitive impairment, and anterograde amnesia. Thus, alternatives to pharmacotherapy approaches to sleep problems are also needed. Michael Vitiello at the University of Washington (MH45186) is examining the effects of increased aerobic fitness on sleep quality, assessed both subjectively and in terms of such objective outcomes as increased circadian temperature amplitude, increased nocturnal growth hormone and somatomedin-c levels and decreased nighttime norepinephrine levels.

Jerome Yesavage, Stanford University (MH 45143), is also testing a non-pharmacological treatment for sleep problems: Sleep Restriction Therapy (SRT). The elderly often report higher frequency of naps compared to younger adults. However, daytime sleepiness that often co-occurs with naps may lead to decrements in cognitive functioning. SRT improves sleep quality by restricting excessive time in bed and allowing a modest accrual of sleep debt resulting in consolidated sleep. The efficacy of a modified SRT intervention, allowing one 30 minute daytime nap, is also being assessed. Whether these treatments have an effect on pretreatment levels of depressive symptoms will be tested as well.

Sleep difficulties also appear in dementia patients, with severe problems often leading to institutionalization of the patient due to safety reasons. Dr. Donald Blivise, at the Stanford University Clinical Research Center on Senile Dementia (MH40041), is studying the relationship of disturbed sleep, altered sleep-wake cycles, apneic episodes, daytime sleepiness and "Sundowning", or nighttime confusion, to excess disability in dementia patients. The prevalence of Sundowning will be assessed in both community dwelling and institutionalized demented patients through caregiver and nursing home staff reports. Preliminary data on sleep changes in dementia patients indicate that patients with normal oxygenation during sleep either showed less confusion in the morning, or were otherwise unchanged from the previous night, suggesting that increased confusion related to sleep oxygenation may represent an early phase of Sundowning. Studies of the clinical efficacy of several commonly used medications for Sundowning are also being undertaken (chloral hydrate, triazolam, thioridazine, L-tryptophan).

Research by William Dement at Stanford University (MH05804) contains three major foci:

Sleep Apnea Research - Given the high prevalence of sleep apnea in the aged, there is a need for more information about risk factors, etiology and treatment of this disorder in late life. Current evidence shows many gaps in demonstrating any relationship between impaired respiration in sleep and systematic definitions of sleep pathology. The purpose of this study is to determine associations between sleep apnea and a) mortality and b) psychological and cardiovascular morbidity.

Research on the impact of age and activity restriction related changes on sleep-wake rhythms and on brain benzodiazepine receptor levels - This research will investigate whether age related sleep-wake cycle fragmentation (e.g., exercise, day time sleep, and nocturnal arousal) is associated with activity dependent changes in benzodiazepine receptor levels. This is of particular importance not only in the understanding of sleep-wake regulation, but in the administration of benzodiazepine sedative hypnotics to elderly patients.

Research on the effects of age and activity restriction on the circadian pacemaker - Since activity provides feedback to the biological clock that influences rhythm phase control, it is plausible that sedentary behavior with aging and age-related changes in circadian timing are interrelated phenomena. This research will examine if age and exercise/activity influence the levels of metabolic activity within the biological clock. Additionally, the research will examine the relevance of, sustained wakefulness in the treatment of age-related disturbances in circadian timekeeping by studying the effects of scheduled sleep deprivation on free-running circadian rhythms.

Stress and Burden: Family Care of the Elderly

Stress associated with family-based care of the elderly has significant social, emotional, and health consequences. Research on the primary caregiver, who is generally a spouse or daughter, has documented an array of psychological and emotional burdens.

In studying the course of psychosocial needs of caregivers for AD patients, Dr. Dolores Gallagher of the Palo Alto Veterans Administration Medical Center (MH43407) found that 33 percent had a major affective disorder, and 21 percent met criteria for dysthymic disorder. The rate of anger was reported at 67 percent, with depressed mood identified in 54 percent of caregivers. A cluster analysis revealed that 50 percent of caregivers rated high on two out of three of the symptoms of dysphoria, anger and anxiety. These findings have lead Dr. Gallagher to develop two interventions: one aimed at anger management, and second aimed at depression management. Dr. Gallagher will also assess how psychological stress, particularly an "anger-in" style may be correlated with cardiovascular disease. Repeated medical evaluations over a one-year period will permit study of the interrelationships among caregiver psychological distress, physical health, and institutional placement of AD patients.

Indeed, there is evidence that the stress of caregiving is associated with health consequences. MDARB is currently funding several research projects that focus on the chronic impact of caregiving on immune functioning and psychological distress. One project being conducted by Drs. Janet Kiecolt-Glaser and Ronald Glaser at Ohio State University (MH42096) indicates that caregivers have increased rates of infectious illness and depression. How caregivers in different contexts--those caring for the patient in the home, those caring for a patient in an institution, those who institutionalized a patient during the course of the study, and those who are recently bereaved--may vary in immune function, is currently being explored.

Linking up with the findings by Dr. Gallagher reported above, one aspect of a recently funded study by Dr. Peter Vitaliano at the University of Washington (MH43267) is an examination of caregiver expression of anger and psychosocial, immunologic and cardiovascular distress. In another ongoing study, Dr. Igor Grant at the University of California, San Diego (42840), is investigating the impact of AD caregiving on adaptive health outcomes, as influenced by coping style, stress, support, and other person-environment factors. This research explores whether neuroendocrine measures and immunologic variables may help distinguish successful from unsuccessful caregivers, and may predict those who will themselves develop an illness.

Critical events in the role of caregiving have differential impacts on individuals. In a large prospective study, Dr. Leonard Pearlin at the University of California, San Francisco (MH42122), is striving to identify the range of stressors experienced by caregivers, and their access to and use of formal and informal supports. Drs. Powell Lawton, Rachel Pruchno, and - Ms. Elaine Brody, all at the Philadelphia Geriatric Center (MH43371), are pursuing study of the variations in caregiving processes. The influence of intrafamilial dynamics, length of caregiving, and characteristics of the person and her social setting are being examined. Caregiving "careers" are being followed, both in new caregivers who will be studied past the death of their care-recipients, as well as in a specific subgroup of caregiving daughters of widowed, impaired older parents, in which the effects of daughter marital status will be assessed.

Pheromones and the Social Regulation of Behavior

Group social interactions may alter physiological processes and ultimately affect such things as the aging process, as reflected by how long the female is capable of reproduction. Martha McClintock's research at the University of Chicago (MH41788) investigates the effects of the social group upon estrus synchrony and the consequences of such synchrony or asynchrony. While it has been observed for some time that one benefit of synchronous estrus cycles in rats is shared care for pups in the group (and an implied increased survival rate among the pups), studies have not considered the consequences of asynchronous timing of the estrus cycles or of the social group upon maternal health. McClintock has found that females living in groups, as compared to isolated females, were capable of reproduction significantly longer. This research has identified a biomarker for vulnerability to the social isolation and to premature reproductive senescence. The result speaks to the influences of the group upon physiological functioning and the vulnerabilities of certain members of the group, namely the females.

Medicare and Mental Health Coverage

Researchers working under support from the Institute to the Center on the Organization and Financing of Care for the Severely Mentally, School of Hygiene and Public Health, Johns Hopkins University, have concluded a policy study noting that less than 3 per cent of the Medicare dollar is spent on mental health and "there is some fear that this small proportion reflects an underuse of mental health services by Medicare beneficiaries." The researchers note that while Medicare coverage for mental illness was liberalized under new provisions of the 1987 and 1989 Omnibus Reconciliation Acts, they conclude the underuse of mental health services in the Medicare program has important implications for how access to such care can be increased. They recommend the elimination of the 190-day lifetime limit on care in freestanding psychiatric hospitals, rebasing the payment system under the TEFRA system using more recent cost information, elimination of special cost-sharing provisions for outpatient mental health services, and expanding Medicare coverage to include a range of long-term care services for the mentally ill (Lave and Goldman, *Health Affairs*, Vol. 9, No. 1, pp. 19-29, 1990).

An NIMH-supported study conducted by researchers at the Commission on Professional and Hospital Activities that assessed the impact of the Medicare Diagnosis-Related Group Prospective Payment System (PPS) on the treatment of Medicare psychiatric patients in overall short-term general hospitals found that the average length of stay of such patients dropped significantly after the immediate inception of PPS but began to slowly rise again in the period 1985-87. Using hospital abstract data from the Professional Activity Study (PAS) database of the Commission for the years 1980-87, the study noted a rise in the volume of admissions in exempt units but a decline in non-exempt units and scatterbeds following the introduction of PPS. The analysis suggests that while "there is evidence that hospitals did respond to the financial incentives of PPS when treating Medicare psychiatric patients....there is, however, no evidence of poorer outcomes, as measured by the readmission rates." ("The Effects of the Medicare Prospective Payment System on Access to Hospital Care for Medicare Psychiatric Patients Treated in Short-Term General Hospitals", Schumacher, February 1990).

A study by Institute staff and related researchers examined the impact of adjusting psychiatric Diagnosis-Related Group (DRG) payments to hospitals that take responsibility for treatment of low-income populations. The analysis focused on the disproportionate payment adjustment of the Medicare Prospective Payment System and examined the relationship between the share of low-income patients and the cost of inpatient psychiatric care. The difference between official adjustment factors and the estimates of this analysis suggest that in large urban inner city hospitals there is systematic underpayment for treatment of low-income psychiatric patients (Rupp and Taube, *Inquiry*, Vol. 26, No. 2, pp. 216-221, 1989).

PROGRAM DEVELOPMENT-INITIATIVES FOR FY 1991

There are several initiatives planned for FY 1991 in the Branch; these include program development in the following areas:

Depression in the Elderly

Planning for the ADAMHA-NIH Consensus Development Conference on Geriatric Depression will be continued, materials will be developed, and the conference will be held in late 1991 or early 1992. Additional activities will be the cosponsorship of a workshop on methodological issues in treatment resistant depression.

Alzheimer's Disease and Memory Disorders

Activities planned for FY 1991 include a workshop on clinical/basic neuroscience in AD, a workshop on psychopharmacologic approaches to memory disorders, a workshop on cognition, affect, and emotion in AD, and a followup to the initiative on family intervention in AD.

1991 White House Conference on Aging

A series of fact sheets and other materials will be developed for the 1991 Conference, and limited support will be provided to the coalition of mental health organizations that will be developing the mental health agenda for the conference.

Financing of Mental Health Services

Research will be stimulated on the financing and cost-effectiveness of outpatient and inpatient care for the mentally ill elderly, including persons with a dual diagnosis of substance abuse and severe psychiatric disorder.

Other activities planned for the year include continuation of projects within the development of DSM-IV, participation in the NIMH medication development program, and a set of other activities relevant to geriatric psychopharmacology.

CLINICAL RESEARCH RELATED TO AGING

PROJECT ABSTRACTS

1R01MH46436-01, Michael Davidson, M.D., Mount Sinai School of Medicine, "Neuropathology of Dementia in Elderly Schizophrenics", \$168,539

Cognitive impairments that clinically resemble dementia are frequently observed in elderly schizophrenic patients. The study proposed in this application will investigate if the "dementia" observed in these elderly schizophrenic patients share the same neurohistological substrates as in known dementing illnesses like Senile Dementia of the Alzheimer's Type or Multi Infarct Dementia. Such a finding would indicate that the observed cognitive deficits may be independent of the schizophrenia and reflect the concurrent presence of another dementing illness. Alternatively, brains derived from cognitively and functionally impaired elderly schizophrenic patients will not meet neuropathological criteria for known dementing illnesses. Such a finding would strongly suggest that elderly schizophrenic patients with cognitive dysfunction are affected by a clinical condition which resembles other recognizable dementing illnesses (Senile Dementia of Alzheimer's Type, Multi Infarct Dementia), but without the corresponding neuropathological correlates characteristic of these dementias. This potential outcome would further suggest that the severe cognitive and functional impairment observed in some elderly patients is another aspect of the schizophrenic illness, and not a concomitant known dementing illness. In order to achieve these aims, detailed cognitive and functional assessments will be conducted antemortem in patients who are older than 65 years, and who meet DSMIII-R criteria for schizophrenia. These patients will be followed until death at which time the brain will be expeditiously removed and neurohistologically assessed.

5R37MH38623-11, Peter Davies, Ph.D., Albert Einstein College of Medicine, "Aging and Dementia: Cholinergic Neuron Biochemistry", \$345,570

The goal of this investigation is to provide insight into the etiology and pathogenesis of the cholinergic dysfunction of Alzheimer's disease and some other dementing disorders, and to attempt to use some of the information obtained to improve the accuracy of differential diagnosis.

During the previous project period, a number of new monoclonal antibodies were developed and used as probes for the study of pathogenesis of Alzheimer's disease. One of these, Alz-50, appears to detect the presence of a protein, A68, which is abundant in the brains of patients with Alzheimer's but is not detectable in the normal adult brain. In this current project period, the investigators will attempt to test the hypothesis that the presence of A68 in cerebrospinal fluid predicts the presence of Alzheimer pathology in the brain. They will also conduct a comprehensive study of possible differences between both plaques and tangles in demented and non-demented elderly subjects, employing monoclonal antibodies to A68 and to other proteins. Studies will continue on the expression to A68-like immunoreactivity in the developing human CNS.

5R01MH43506-03, Gary Dean, Ph.D., University of Cincinnati, "Alzheimer's Disease Clinical Etiology--PHF cDNA Cloning", \$108,576

The specific aim of this study is to identify the primary etiology of Alzheimer's disease (AD) by utilizing recombinant DNA technology to study one of the primary neuropathologic features defining this disorder. Characteristic of all patients with AD is the presence of paired helical filaments (PHF) in neurofibrillary tangles in specific regions of the brain; a good correlation exists between PHF density and the severity of Alzheimer-clinical presentation. Investigators propose to determine the primary structures of several peptides derived from proteolyzed PHF. Oligonucleotide probes corresponding to these sequences will then be synthesized and used to screen cDNA libraries by nucleotide hybridization. The complete cDNA sequences will be isolated and determined by conventional methods. From the cDNA sequence the complete peptide sequence will be inferred; mono-specific antisera for each of the cDNA-encoded proteins will be produced and used to rigorously demonstrate PHF-localization. Antisera (and possibly cDNAs) will be used to obtain preliminary estimates of amounts of specific proteins (and potentially the mRNAs) in normal and AD brains. If time permits, the cDNAs will be used as probes to isolate the genes for these proteins from genomic libraries.

Successful completion of the research will result in the unambiguous delineation of the primary structures of PHF proteins, their possible identification with known proteins, and the acquisition of mono-specific antisera for each of the proteins. These nucleotide and serological probes will permit further examination of the PHF genes and proteins, including 1) measurements of the tissue-specificity and cellular localization of the proteins; 2) the chromosomal localization of the encoding genes; and 3) comparisons of the full gene structures between Alzheimer-diseased and normal patients, with the potential of detecting restriction fragment length polymorphisms (RFLP's). Furthermore, it will be possible to isolate (from brain) or produce (using genetically-engineered micro-organisms) sufficient amounts of each of the proteins to permit in vitro examination of their biochemistry.

SR01MH43965-03, Mony DeLeon, Ph.D., New York University, "Clinical Correlates of Longitudinal PET Changes in Alzheimer's Disease", \$370,823

This study proposes a 5 year PET-MRI longitudinal study of 65 AD and 60 control subjects; half of each group will have MRI evidence of PMNL (periventricular CT/MRI white matter lesions). Using repeated measures multivariate analyses of variance and correlation procedures, it is intended to investigate longitudinal changes in regional metabolic rates and their association with clinical deterioration and white matter disease. It is hypothesized that the controls with white matter changes are at risk for clinical deterioration, particularly motoric dysfunctions. In addition, it is hypothesized that AD patients with PMNL are at greater risk for cognitive/motor deterioration. The hypothesized increased risk associated with PMNL is derived from the neuropathologic observations that these patients suffer microvascular hyalinosis which causes edema, rarefaction of white matter and axon loss. The investigators hypothesize that these changes are independent of AD and add to the brain-damage burden of the patient. They propose to continue post-mortem studies of these groups and several pilot projects are described.

SR01MH43240-03, Leonard Heston, M.D., University of Minnesota, "Family Studies in Dementia", \$153,363

The object of this study is to locate and then characterize DNA sequences associated with Alzheimer's disease or Pick's disease or both.

During the 02 year, investigators continued to identify potential families with familial Alzheimer's disease (FAD), further define the families already ascertained, performed RFLP analysis on the current group of families using chromosome 21 probes, and performed linkage analysis to detect the likely location of FAD gene.

The complex nature of FAD diagnosis and the potential of genetic and etiologic heterogeneity has led the researchers to attempt to complete the individual pedigrees as fully as possible with respect to ages of all individuals. The presence of FAD in pedigree members has been verified by autopsy. Members of the informative families for linkage have been requested to provide blood samples. These samples are used to establish lymphoblastoid cell lines from which DNA may be extracted and genetic linkage analysis may be performed. Additional typing results in other family members and the analysis of these families using the multipoint linkage strategy are being planned and may produce information concerning the location of FAD with respect to markers (particularly PW228c and PW236b) or other markers.

SR01MH40705-05, Andrew Leuchter, M.D., University of California, "Mental Illness in the Elderly; Diagnostic Testing", \$260,779

The two aims of this study are: 1) develop computer-analyzed electroencephalography (CEEG) more fully as a tool for the differential diagnosis of dementia, 2) establish links between brain functional abnormalities seen on CEEG and structural lesions seen on magnetic resonance imaging (MRI) scans.

There are six steps in the research plan:

1. New subjects will be recruited for the existing cohort of subjects with Alzheimer's disease (DAT), multi-infarct dementia (MID), and normal control subjects (CON).
2. Subjects will be recruited for three additional groups: those with major depressive episode (MDE), dementia of affective disorder (DAD), and dementia of other or unknown etiologies. All subjects being evaluated for dementia will undergo a thorough evaluation which will include mental status testing, neuropsychological testing, neurologic examination, a battery of relevant laboratory tests, as well as MRI scanning. A subset of CON and MDE subjects also will undergo MRI scanning.
3. All subjects will undergo conventional EEG studies, which will be interpreted by an electroencephalographer, as well as CEEG studies.
4. All MRI scans will be quantitatively rated by two neuroradiologists for the severity and location of deep white-matter lesions, periventricular lucencies, and atrophy. MRI scans will be correlated with CEEG topographic maps to detect co-localization of functional and structural lesions.
5. Subjects will be reassessed on an annual basis or more frequently if suggested by their CEEG procedures, and any other tests which are clinically indicated.
6. Subjects will be followed to autopsy to confirm clinical diagnoses and to correlate MRI lesions with neuropathological findings. Specific experimental hypotheses regarding the sensitivity and specificity of CEEG measures, the significance of lesions seen on MRI, and the capacity to co-localize functional and structural lesions will be tested.

Supplemental funding has been provided to this research to support the involvement of a minority investigator in the project. The area of the investigator's research interest and effort will be assessment and recruitment of minority and low socioeconomic status (SES) subjects into the ongoing research project.

5R37MH39145-07, Carol Miller, M.D., University of Southern California, "Mental Illness in Alzheimer's Disease of the Aged", \$230,904

The hypothesis of this study is that a defined spectrum of molecular changes will be detectable in AD target tissue, and that the sites and degree of AD may be related to specific changes in cognition and behavior during the clinical course of the patients.

Researchers will analyze neuronal-specific function at three levels: clinical, histologic, and molecular. The clinical studies will focus on the visual system, integrating the neurologic and psychometric data base with specific visual function studies. A parallel assessment of auditory system neuronal changes will be made. Temporal progression of neuronal loss in AD will be examined. With use of neuron-specific monoclonal probes, the architectonic differences in neuronal changes in AD will also be compared to other dementing diseases. The AD-vulnerable neurons will be further defined by: 1) immunocytochemical identification of their associated neurotransmitter and neuropeptides, 2) molecular characterization of Ag3F12, 3) development of a neuron-enriched cDNA library. Development of this neuronal subset-specific molecular panel may contribute to the understanding of regulatory mechanisms operative in these cells in AD.

5R01MH43326-02, Godfrey Pearlson, M.D., Johns Hopkins University, "PET D2 Receptor, MRI and CT Changes in Late Onset Schizophrenia", \$277,202

This study will examine the structural and dopamine D2 receptor brain changes associated with late life onset schizophrenia using MRI, CT, and PET scanning. Preliminary studies indicate that schizophrenic illness with late life onset shows both important similarities and differences compared to more typical cases with onset in early life. Control groups will consist of elderly normal volunteers and currently elderly early life onset schizophrenics, matched for age, sex, and race with the late life onset schizophrenics. Structural brain and receptor changes will be analyzed to determine their association with clinical symptomatology, neuropsychologic abnormalities, sensory deficits, and social factors. This may aid understanding of late life onset schizophrenia and clarify the relationship of this syndrome both to early onset cases and to the psychopathology of aging.

SR01MH40843-03, Peter Rabins, M.D., Johns Hopkins University, "Structural Brain Changes in Late Life Mental Disorder", no FY '90 funds

This project will use a newly developed CT scan image process analysis technique to study structural correlates of late life major depression and dementia. It will identify 35 subjects aged 60 or older in each of the following groups over a two year period: major depression/normal cognition; major depression/abnormal cognition ("pseudo-dementia"); primary degenerative dementia (senile dementia of the Alzheimer type); age matched normals. Cognitive test performance data will be obtained in all patients. Patients will be re-examined one and two years later. Data on recovery status, further episodes, CT changes and cognitive performance will be collected.

Data will be analyzed to determine if functionally well psychiatric patients have brain CT attenuation values in the normal or abnormal ("demented") range, and if CT attenuation values and performance on neuropsychological testing at the initial exam predict treatment response and condition at follow-up. That is, the project will determine if predictors of poor outcome in major depression and major depression/abnormal cognition can be identified. The proposed study will also examine relationships between CT attenuation numbers and measures of cognitive function and examine the hypothesis that patients with the greater declines in CT attenuation values will have a poorer prognosis regardless of diagnosis.

2R01MH37869-08, Charles Reynolds, M.D., Western Psychiatric Institute and Clinic, "EEG Sleep, Aging, and Mental Illness", \$372,975

This is a study of the development of objective indicators of diagnosis, treatment response, and prognosis, based on measures of nocturnal EEG sleep parameters in healthy elderly controls, major depressives, Alzheimer's patients, and mixed symptom patients.

During the previous project period preliminary analyses have been done of the rapid eye movement (REM) sleep deprivation experiment which suggest that elderly depressed patients show more rapid phasic REM activity accumulation than controls and demented, as well as more fixed intra-night REM sleep temporal distribution. By contrast, healthy controls evidence more plasticity of REM sleep activity generation. Demented patients show the lowest rate of REM activity generation. Recovery from REM sleep deprivation appears to have a differential impact on slow wave sleep counts: decreasing in controls, increasing in depressives, and staying the same in demented subjects.

SR01MH40052-05, Walton Roth, M.D., Stanford University, "Automatic Elicitation of Cognitive ERP Components", \$129,740

The four aims of this project are:

1. Employ auditory stimuli to explore ways of automatically eliciting N400, a component usually elicited visually by semantically incongruous words.
2. Test for the best auditory stimulus frequency and stimulus duration characteristics for eliciting the automatic P300 in healthy elderly.
3. Test healthy young and old subjects on both automatic and effortful versions of the P300 and Mismatch Negativity (MMN) paradigms, as well as the auditory N400 paradigm to assess cognitive changes associated with normal aging.
4. Test Alzheimer's patients on the same paradigms to determine whether effortfully or automatically elicited ERP components best delineate cognitive deficits in the patient group.

Event Response Potentials (ERPs) have been invaluable in delineating the timing and amount of specific aspects of information processing in cooperative and cognitively intact subjects, but they have been less helpful in the assessment of patients unable or unwilling to cooperate with testing procedures. The researchers propose to continue developing paradigms for eliciting cognitive event related potential components automatically and applying them along with conventional task-related paradigms to assess cognitive changes associated with aging and dementia.

1R29MH46424-01, Gary Small, M.D., UCLA, "Mental Illness in Aging: Early Diagnosis", \$92,741

This study proposes to examine 80 first degree relatives of patients with Alzheimer's disease (AD) who have Familial Age Associated Memory Impairment (FAAMI). Its hypotheses are straightforward, that approximately 50 percent of these subjects will go on to develop dementia of the Alzheimer type (DAT) during the 3-year follow-up phase, while the other 50 percent will remain in the FAAMI category. The principal investigator predicts that the use of positron emission tomography (PET) scan technology will be sufficiently sensitive to detect these individuals before they manifest other objective findings, such as abnormalities on neuropsychological testing. The PI has carried out a series of PET studies in collaboration with colleagues at UCLA which naturally lead to this question. Earlier work examined, both early and late onset patients, clarified the relationship between gender and cerebral metabolism and demonstrated cerebral metabolic defects in NINCDS-ADRDA defined "possible" AD patients before they progressed to more clear-cut disease. Thus, the proposed research reflects a logical sequence of investigation.

1R01MH45968-01, George S. Zubenko, M.D., Ph.D., Western Psychiatric Institute and Clinic, "Genetics of the PMF Locus in Primary Dementia", \$157,834

This study proposes a genetic mapping strategy to localize the platelet membrane fluidity (PMF) locus, toward an understanding of the function of this gene and its role in the pathophysiology of mental disorders of late life. The PI plans to determine whether the PMF locus resides on chromosome 21 using genetic linkage analysis techniques. Several genes related to the biology of Alzheimer's disease have been previously localized on chromosome 21. He plans to test 14 restriction fragment length polymorphisms (RFLP) loci, including the region reported to contain a gene for familial Alzheimer's disease (FAD), the structural gene for the beta amyloid precursor protein (APP), and the region associated with the development of Down's syndrome, for co-inheritance with the PMF phenotype. This constitutes a direct test of his hypothesis: That the PMF locus will map to 21q and will be distinct from both the FAD and APP genes.

5R01MH43261-03, George Zubenko, M.D., Western Psychiatric Institute and Clinic, "Biological Marker for Primary Dementia in the Elderly", \$232,699

This study is for 5 years of support to study platelet membrane fluidity as a familial marker of a subtype of Alzheimer's disease. This may be the first biological marker to identify a clinically distinct subgroup of demented patients from among a cohort of patients who meet currently accepted diagnostic criteria for probable Alzheimer's disease. Clinical studies are to include investigations of the specificity of the marker, longitudinal studies in patients with AD, and family studies. Preclinical studies are to include electron microscopy of platelet membranes and examination of enzyme markers in membrane compartments, cholesterol-phospholipid ratios in platelet membrane samples, lymphocyte membrane fluidity, as well as in-vitro testing for circulating toxins or deficiencies.

5R01MH43872-02, Kathryn Bayles, Ph.D., University of Arizona, "Communication and Neuropsychiatric Status in Dementia", \$201,742

The purposes of this project are: (1) to compare patterns of impairment in language and communicative functions, psychiatric and neurologic status in Parkinson's disease (PD) and Alzheimer's disease (AD); (2) to describe the progression of change in language and communicative functions, psychiatric, and neurologic status during the course of PD and AD; and (3) to determine the relation of onset and duration of symptoms and depression in PD and AD to the nature of language and communication deficits. A series of specific hypotheses, concerned with dissociations between the different memory domains in AD versus PD patient groups, and with neurologic and psychiatric correlates of differential patterns and courses of communicative impairment, will be tested.

5R01MH42819-02, George Alexopoulos, M.D., Cornell University, "Longitudinal Study of Late Life Depression", \$179,589

This is a five year longitudinal project that is studying the clinical presentation, outcomes, and predictors of outcomes of geriatric depression with a focus on the effect of age of illness onset. The hypothesis is that patients with first occurrence of depression in late life (LLD) differ from subjects with first occurrence of depression in early life (ELD) in the following ways: 1) more LLD subjects have delusions, medical morbidity, and/or cognitive dysfunction during episodes; 2) LLD subjects have poorer outcome, including more relapses, dementia, and medical morbidity; and 3) LLD subjects have different demographic, clinical, and psychosocial predictors of specific outcomes. This hypothesis is based on finding which suggest that clinical, biological, and family history differences exist between LLD and ELD. The study is expected to yield information that clinicians can use to: 1) determine prognosis of geriatric depression; 2) assess risk-benefit ratio of therapeutic or preventive interventions; 3) identify periods of highest risk for adverse outcomes, and plan treatment accordingly. It is anticipated that findings from this study will stimulate clinical research testing new treatment and prevention models, and will comprise the background for studies seeking to identify subtypes of geriatric depression with different clinical and biological characteristics.

5 R01 MH40827-05, Kathryn Bayles, Ph.D., University of Arizona, "Communication Disorders in DAT: Longitudinal Perspective", no FY '90 funds

The purpose of this project is to longitudinally and comprehensively investigate the nature of communicative impairment in patients with Alzheimer's dementia (DAT) who have been carefully evaluated as to (a) age of disease onset, (b) presence of extrapyramidal symptomatology, (c) family history of DAT, (d) rate of disease progression, and (e) dementia severity. Reports of variation in the clinical behavior of DAT patients in relation to the aforementioned variables have been sufficiently compelling to motivate the NINCDS-AURDA sponsored work group to recommend their use by researchers in the description of DAT patients. The study will produce the first well-documented natural history of linguistic dissolution of DAT patients controlled for severity, age, family history, extrapyramidal symptomatology, and rate of disease progression. Clinicians will have extensive information about the diagnostic efficacy of a wide range of communication measures and their suitability for use with different types of DAT patients. Finally, baseline data about communicative functioning of DAT patients will be available to clinicians desirous of testing the efficacy of various therapies.

5R01MH42103-03, Nathan Billig, M.D., Georgetown University, "Mental Status Changes After Surgery in the Elderly", \$203,297

The purpose of this study is to assess the extent to which cognitive impairment and/or depression are precipitated or exacerbated by surgery in the elderly. Specifically, the research aims of the project are: (1) to assess the prevalence of peri-operative cognitive impairment and depression in a sample of patients aged 60 and over, undergoing elective surgery; (2) to assess whether hospitalization and surgery serve as precipitating factors for cognitive impairment and depression in the elderly; (3) to define cognitive impairment in the peri-operative period as to its clinical correlates, including medication use, the nature of the surgical procedure, anesthesia, etc.; (4) to estimate the extent to which elective surgery affects recovery of pre-morbid functioning over a period of a year following surgery.

SR01 MH24433-14, Suzanne Corkin, Ph.D., Massachusetts Institute of Technology, "Behavioral Effects of Brain Injury", \$324,421

The overall goal of this research is to investigate brain mechanisms underlying normal human perception, cognition, and action; the approach will be to study patterns of sparing and loss of function in patients with selected cerebral lesions. This inquiry, grounded in neuroscience and in cognitive science, relates the specific deficits that follow brain injury to theories of brain organization and to the interplay of cognitive systems. The aspects of behavior that are selected include memory, cognitive functions other than memory, and sensory and sensorimotor capacities ranging from simple to complex. Two groups of subjects are to be studied: men with cerebral injuries sustained during World War II or the Korean conflict, and men and women with amnesias of several different etiologies, resulting from damage to various discrete brain structures. Control subjects will include World War II veterans with peripheral nerve injuries, healthy Korean conflict veterans, and normal civilian subjects.

SR01MH45048-02, Marion Goldstein, M.D., SUNY-Buffalo, "Neuropsychiatric Disorders in the Elderly Undergoing Surgery", \$195,153

This is a 36-month empirical investigation into the relationship between geriatric surgery and neuropsychiatric decline. The effects of three types of elective surgery, all performed under general anesthesia, will be studied: 1) total joint replacement (TJR); 2) cholecystectomy; and 3) inguinal hernia repair. Subjects will range from 55 years to those of 75 years and older. In addition to a pre-operative psychosocial history, a battery of seven standardized measuring instruments will be administered, covering the cognitive, affective, and functional-behavioral aspects of patient behavior. The study will test hypotheses pertaining to the incidence of post-surgical decline in older patients, its moderation by sex, age, and type of surgery, and its relationship to post-operative delirium.

SR37MH43693-03, Dilip Jeste, M.D., UCSD, "Late-Onset Schizophrenia: A Neuropsychiatric Study", \$153,095

The onset of schizophrenic symptoms after the age of 45 is not rare, yet, there have been few systematic studies of neuropsychological, brain-imaging and treatment-response characteristics of late-onset schizophrenia. The researchers postulate that schizophrenia with onset after 45 is a heterogeneous entity with different subtypes. Some of these subtypes may be identifiable with certain clinical, neuropsychological and brain morphological evaluations, and may be associated with differences in neuroleptic response. A 6-month pilot study of 14 late-onset schizophrenics shows both the feasibility of and the need for this investigation. 90 DSM-III-R late-onset schizophrenics will be studied over a period of 5 years. Patients will be assessed with selected psychiatric neurologic and neuropsychological measures at baseline and then systematically followed at four-month intervals. MRI scans of the brain will be done at the time of study-entry and will be analyzed with quantitative densitometric and volumetric methods. Normal controls matched for age, gender, level of education and socioeconomic status will be evaluated and followed in a manner similar to late-onset schizophrenics. Neuroleptic response in the late-onset schizophrenic patients will be evaluated in terms of therapeutic benefit (comparing "drug-free" psychopathology ratings with those after 6 weeks of haloperidol), and risk of tardive dyskinesia. On the basis of the literature review and the data, it is predicted that one subset of patients diagnosed as having late-onset schizophrenia will have significant neuropsychological deficits and structural abnormalities in MRI, and poor therapeutic response to neuroleptics with greater risk of tardive dyskinesia. A small proportion of such patients will be found, at follow-up, to have a diagnosable dementing disorder that initially presented with a schizophrenia-like clinical picture. Another subset of patients will be similar on various measures to age-matched normal controls. It is believed that these findings will help improve the understanding of the diagnosis, neurobiological subtyping and neuroleptic treatment of late-onset schizophrenia.

5R29MH44697-02, Alan Kluger, Ph.D., New York University, "Motor Deficit and White Matter Lesions in Aging and Alzheimer's Disease", \$107,071

This is a study to examine possible relationships among motoric dysfunction, presence of periventricular white matter lesions (PWML) and cognitive function in the elderly. The presence of PWML on CT/MRI has been recently associated with subclinical motor deficits in cognitively normal elderly subjects and with an increased prevalence of motor dysfunction and gait abnormalities in patients with Alzheimer's disease (AD). These PWML have also been linked to the appearance of small blood vessel disease in the brain. This study will test the motor function of 60 cognitively normal and 60 mildly cognitively impaired elderly subjects by employing a variety of neuropsychological and computerized tests of motor/psychomotor performance. Each of these two subject groups will be equally divided between subjects with and without PWML. The PWML will be carefully classified by regional location(s) and the magnitude of the lesion(s). In order to evaluate the predictive power of the motor test measures and the MRI findings for detecting subsequent motor/gait and cognitive status, each subject will be reevaluated for motor function and given a second MRI scan two years after the initial evaluation. It is expected that results obtained from this investigation will contribute to basic knowledge concerning brain-behavior relationships in aging and dementia, and provide useful information for the identification of elderly patients who are at risk for the subsequent development of clinically significant motor/gait problems (which are associated with falling in the elderly) and cognitive dysfunction.

5R29MH43856-03, Barnett Meyers, M.D., Cornell University Medical College, "Geriatric Major Depression and Delusions", \$108,716

Disturbances of hypothalamic-pituitary-adrenocortical functioning have been found to be exaggerated in elderly depressives, and dopamine beta hydroxylase may decrease as a function of age. In the present study, elderly unipolar depressives are studied to test the theory that hypercortisolemia resulting from the depressed state interacts with a trait for an excessive dopaminergic response to steroid stimulation in the pathogenesis of mood-congruent delusional depression. Hospitalized geriatric unipolar major depressives will be separated into three clinical groups based upon presence and type of delusions: mood congruent delusional depressives; mood-incongruent delusional depressives; and depressives without delusions. Twenty-five subjects in each group and twenty-five controls will be compared for: pretreatment plasma cortisol and resistance to dexamethasone suppression; dopamine beta hydroxylase activity; and family risk for unipolar depression versus schizophrenia. Recovered subjects will be assessed for dopaminergic responses to dexamethasone.

1R01MH45779-01A1, Thomas Oxman, M.D., Dartmouth College, "Age, Social Support, and Physical and Emotional Disability", \$128,517

The primary goal of this project is to identify specific aspects of social support associated with the varying level of improvement in functional disability--physical and emotional--following cardiac surgery in the elderly. The specific aims are: 1) to examine the relationship of characteristics of the social network of providers of support (available number, frequency of contacts, geographic proximity, kinship, and the presence of a confidant) to changes in level of physical and emotional functional disability in the elderly; 2) to examine the relationship of the type and amount of support (emotional, tangible aid, guidance) to changes in level of physical, and emotional functional disability in the elderly; and 3) to examine the relationship of the perceived adequacy of social support to changes in level of physical and emotional functional disability in the elderly. The broad, long-term objective of this work is to identify those social aspects that contribute to improvement in physical and emotional functional disability and that could be mobilized around hospitalization for medical or surgical illnesses in the elderly.

3R01MH43435-02S1, Leonard Poon, Ph.D., University of Georgia, "Adaptation and Mental Health of the Oldest Old", \$31,020

The importance of nutrition on longevity and survivorship is generally acknowledged but poorly understood. The purpose of this supplement is to add a nutritional component to the already funded grant "Adaptation and Mental Health of the Oldest-old." This component will examine the nutritional patterns, nutritional risk measures, eating behaviors, and health seeking behaviors of participants in their 60's, 80's and 100's. Together with data collected on the same individuals in the parent project on environmental and individual differences that influence survivorship, this component will: 1) elucidate on nutritional patterns of the oldest-old which has practically no extant data; 2) test hypotheses generated by the Bonn Longitudinal Study on the influences of education, occupation, socioeconomic status, environmental support, personality and individual characteristics on nutritional patterns, and in turn the contribution of nutrition to longevity; 3) examine the relationships among nutritional patterns, nutritional risk measures and eating and health seeking behaviors on functional and mental health and life satisfaction; and 4) examine the contributions of gender and advanced age to these nutrition and health behaviors. Pilot studies have been performed to ascertain that the nutritional assessment instruments will obtain meaningful data from individuals in their 60 to 100+ years. It is anticipated that this component will harvest important data at modest cost.

5R01MH43435-03, Leonard Poon, Ph.D., University of Georgia, "Adaptation and Mental Health of the Oldest Old", \$304,759

This research will examine the processes involved in the successful adaptation of cognitively intact, community-dwelling octogenarians and centenarians. The major interest is in the nature of the mental health, coping, adaptational skills, and environmental support that are necessary to survive successfully in the different stages of late adulthood. The research will concentrate on life satisfaction and the adaptational processes (adaptational and coping skills, beliefs, manipulation of the environment, etc.) that can bring life satisfaction. Four hypothetical models are being designed within a defined general model of factors contributing to life satisfaction, adaptation, and health of the oldest old. The first relates a number of adaptational or survival skills; the second describes the patterns of physical and mental health among cognitively intact 60, 80, and 100 year olds and the influence of health on life satisfaction, cognitive skills, and the level of environmental support; the third relates the patterns of activities, time use, and environmental support as indicators of life satisfaction and mental health; the fourth links individual characteristics as predictors of life satisfaction and mental and physical health.

5R01MH43390-02, J. Ramon Valle, Ph.D., San Diego State University, "Hispanic Elderly Cognitive Screen Validation Study", no FY '90 funds

This is a two year study to validate the Spanish language version of two commonly used cognitive screens: the Folstein Mini Mental Status Exam (MMSE) and the Blessed (et.al. 1968) Mental Status Exam (BMSE), with Spanish Speaking (SS) Mexican heritage Hispanic (MHH) elderly age sixty plus. In their combined format, these measures will be identified as the Mental Status Assessment Battery (MSAB). The Spanish language MSAB will undergo rigorous translation/back translation procedures and pretested with 20 elderly SS/MHH subjects prior to going into the field. The project has 3 distinct phases: I) locating of 50 MHH and 50 Anglo suspected Alzheimer's disease/demented individuals and then do cognitive screening using the MSAB. Phase II will encompass the criterion assessment of these 100 subjects using a neurological exam and a neuropsychiatric exam. Phase III will entail the assessment of 100 normal Hispanic elderly age 60+ using the Spanish language MSAB and 100 Euro/Anglo normals with the English MSAB. This project is seen as addressing an urgent need for the development of culture free/fair cognitive assessment instrumentation for use with this growing ethnic minority elderly population group.

SR37MH33688-11, Patricia Prinz, Ph.D., University of Washington, "Biomarkers for Early Expression of Alzheimer's Disease", \$265,046

This is a study to test the ability of biomarkers to predict for Alzheimer's disease-like decline in a sample of 300 individuals "at risk" for AD. This "at risk" sample will consist of subjects with a validated memory complaint who meet NINCDS criteria for possible/probable AD (or almost meet these criteria). The subjects will be aged 45 or more and be free of confounding medical psychiatric disorders except depression. During the initial study period (time 1), researchers plan to collect both dependent (clinical, cognitive, and function) and independent (biomarker) variables. After thirty months, subjects will be recalled and follow-up (time 2) dependent measures will again be collected. Subjects whose time 2 status is confounded due to pharmaco-medical, psychiatric or compliance problems will be dropped from the study at this time. For the remaining unconfounded subject, the clinical, cognitive and functional status, both at time 1 and time 2 will be used to assign each subject to one of three outcome groups (AD, Not AD (NAD) or Indeterminate). Researchers will then examine the ability of their T1 biomarkers to correctly classify the AD/NAD status of their subject at follow-up. They will also examine T1 biomarkers for their contribution (if any) to subject subgrouping formed on clinical and functional grounds. The aim is to develop AD biomarkers useful in achieving an earlier and more accurate diagnosis of AD. Developments in this field are an important adjunct to treatment/intervention research in AD. They will also bank leukocytes and plasma from the study sample for future analyses of genetic and plasma factor profiles consistent with AD. This will allow for questions about the relationship between genetic predisposition and early expression of AD in future studies.

1R01 MH46643-01, Graham Ratcliff, Ph.D., Western Psychiatric Institute and Clinic, "Age Associated Memory Impairment: A Community-Based Study", \$257,434

This is a community-based study of Age Associated Memory Impairment (AAMI) designed to discover its characteristics, prevalence, incidence, and clinical significance. The 1,000 subjects will be drawn from a sample of 1,250 elderly adults currently participating in a cardiovascular health study in which extensive demographic and medical data are being collected. Diagnosis will be made on the basis of neuropsychological testing, subjective report, and interview. Two levels of AAMI will be distinguished: The first, an age-appropriate decline in memory from presumed optimum young adult levels, is expected to be present in 25-55% of the population. The second, a more profound decline specific to memory and resulting in memory test performance which is impaired even when compared with that of their age-peers, will be much less common (probably 5-10%). The extent to which these represent qualitatively distinct entities, rather than different degrees of impairment, will be considered. The possibility that the atypical form is the forerunner of an impending dementia will be investigated. Evaluations will be repeated after 18 months (in year three of the cardiovascular study) to discover the extent to which AAMI is progressive, how it progresses and to look for new incident cases. The relationship between AAMI, cardiovascular disease, depression, and other forms of comorbidity will be examined.

Two additional studies involving small subsets of the AAMI sample will be integrated into the core project. One will be a cognitive neuropsychological study of memory impaired subjects designed to discover the extent to which the memory impairment of AAMI qualitatively resembles that seen in dementia. The other substudy will be a treatment trial investigating the extent to which training in the use of external memory aids, and other compensatory techniques can reduce the impact of AAMI on daily life.

5R37MH42248-04, George Vaillant, M.D., Dartmouth College, "Life Course, Mental Health and Later Development", \$134,129

This study will assess late midlife outcomes in two contrasting samples of men whose life course has been prospectively studied since adolescence. The COLLEGE sample includes 204 men selected as sophomores in 1940-42 for mental and physical health and high achievement. The CORE CITY sample includes 456 socially disadvantaged men selected in 1940-44 at ages 11-15 by the Gluecks as non-delinquent controls. Three outcomes will be assessed:

1) age at and adjustment to retirement--COLLEGE sample only (in 1990 youngest man will be 66); 2) deterioration of physical health between age 55 and 65 (COLLEGE sample) and between age 45 and 55 (CORE CITY) sample (youngest man will be 58 in 1990); and 3) objective evidence of late midlife psychopathology (e.g. unemployment, psychiatric care, lack of job and/or marital enjoyment, social isolation, etc.). Attempts will be made to answer the following questions:

1) What familial, childhood, and early adult psychological variables (e.g. defense mechanisms, major depressive disorder, etc.) predict physical morbidity, early retirement and psychopathology of late midlife? How are these effects mediated?
2) What is the natural history of marital and occupational careers over the male life span? How do these careers affect late-life psychopathology and deterioration of physical health?
3) Can Erikson's model of adult development be made operational?
4) By what mediating processes have some men, whose mental health when young was poor, become competent 60 year olds? By what processes have some men, well adjusted when young, become psychosocially impaired at 65?
5) Preliminary data suggests that the prevalence of ill health and death of the CORE CITY men at 55 is similar to the COLLEGE sample at 65. What variables account for this differential morbidity?

5R01MH42522-03, Robert Young, M.D., Cornell University Medical College, "Geriatric Mania", \$97,080

This project will study the clinical presentation, outcomes, and predictors of outcomes in elderly patients with bipolar disorder, manic phase. The hypothesis is that patients with older age at index episode differ from patients with younger age at index episode, and older patients with first occurrence of mania in late life (LLM) differ from older patients with first occurrence of mania in early life (old-ELM) in having: contrasting clinical presentations; poorer outcomes--including poorer acute response to lithium treatment, more relapses, more persistent cognitive dysfunction and dementia, and more medical morbidity and mortality; and different predictors of specific outcomes.

1R01MH45389-01, Cameron Camp, Ph.D., University of New Orleans, "Mental Disorder in SDAT: Prospective Memory Intervention", \$143,282

Memory loss is one of the most pervasive mental disorders associated with Senile Dementia of the Alzheimer's Type (SDAT). Spaced retrieval training, previously successful in aiding memory in this population, will be used to enhance performance in prospective memory tasks. The intent of the proposed intervention is to use spaced-retrieval training to facilitate the efficient use of a versatile external memory aid - a calendar. The aim is to use the training to allow participants to learn and retain a specific internally-stored strategy-- look at the calendar when you want to remember what to do. To use the calendar as an external memory aid, participants must: a) learn and retain an internal memory (the trained strategy); b) translate the strategy into action (go to the calendar); and c) execute activities written on the calendar. The ability to accomplish each of these steps, singly and in concert, will be assessed in 192 individuals with SDAT. Control procedures using yoked pairs of participants will allow researchers to determine if the active recall required by the spaced-retrieval technique is significantly more effective than passive presentation at the same expanding interval schedules at enhancing retention for these individuals. The impact of spaced-retrieval training on general memory ability will also be assessed. In summary, the study will address the extent to which a strategy can be trained with spaced-retrieval techniques, and whether the combination of training a strategy and providing an external memory aid can be used to allow individuals with SDAT to effectively execute prospective memory tasks. If successful, this intervention could greatly enhance both independence and self-esteem.

1R01MH41821-02, Robert E. Becker, M.D., Southern Illinois University, "Effects of Long Acting Anticholinesterase in Alzheimer's", \$116,919

This is the first double blind evaluation of a long acting cholinesterase inhibitor in Senile Dementia Alzheimer's Type (SDAT). The specific aims are to determine the efficacy of metrifonate in improving memory functions and activities of daily living (ADL) in patients with SDAT. The relationship of clinical improvement to levels of inhibition of cholinesterase (ChE) in blood and cerebral spinal fluid (CSF) will be addressed.

Severe disturbances of the acetylcholine system are associated with SDAT. Deficiency of cholinergic activity has been proposed as the neurochemical basis of the impaired cognitive function that occurs in SDAT. Cholinesterase (ChE) inhibitor drugs, especially physostigmine (Phy) have been used to attempt to compensate for the cholinergic deficiency. These trials have suggested that ChE inhibition may result in improved cognitive function. The half life of Phy is so brief that brain, blood, and CSF inhibition of ChEs do not come to equilibrium, giving good reason to assume that equivocal behavior and cognitive changes following Phy may be the result of inadequate central ChE inhibition.

Metrifonate is a safe drug that inhibits ChE activity in blood for 6 to 14 days after a single dose in humans. It inhibits ChE and increases ACh in rat brain after intraperitoneal injection.

This study is the first to examine the efficacy of metrifonate in SDAT and the first to combine quantitative biochemical measures of AChE and butyrylcholinesterase (BuChE) activities with study of the clinical effects of long term steady state ChE inhibition. This study may be an important test of the ACh deficiency hypothesis in SDAT. If persistent significant inhibition of CSF is not accompanied by behavioral change, this will argue strongly against the clinical therapeutic relevance of cholinergic loss in the CNS.

A two phase, open and subsequent double blind, clinical trial (total N=80) will be conducted to test the efficacy and safety of metrifonate in mildly and moderately impaired SDAT patients. Blood and CSF ChE levels before and after drug administration will be measured. Outcome will be measured for cognitive, ADL, mood, and adverse drug effects.

5R01MH45067-02, Scott Campbell, Ph.D., Institute for Circadian Physiology, "Bright Light Treatment of Sleep Disturbance in the Elderly", \$152,744

This two-phase project will intensively study light exposure in relation to sleep disturbance in 40 elderly subjects. In Phase 1, baseline levels of light exposure will be correlated with physical activity and with subjective assessments and objective measures of sleep disturbance. In Phase 2, researchers will evaluate the short-term effects of timed bright light exposure on the disturbed sleep patterns of these subjects.

This research will be the first to record chronobiological variables in sleep disturbed elderly subjects in a natural setting, thus providing valuable etiologic data on this group. These studies will also be the first to test the efficacy of a promising, non-pharmacological treatment for sleep disturbance, under conditions of normal daily living. It is expected that this important first study will form the basis for subsequent investigations to evaluate: (a) the long-term effectiveness of bright light therapy in controlling sleep disturbance and enhancing quality of life and health in the elderly, and (b) the application of these approaches to other clinical conditions (e.g. Alzheimer's disease, autism/retardation), and settings (e.g. nursing homes).

SR29MH44176-02, Davangere Devanand, M.D., Columbia University, "Haloperidol Treatment in Alzheimer's Disease", \$101,651

The efficacy and side effects of low dose (0.5 to 0.75 mg. daily) versus traditional dose (2 to 3 mg daily) oral haloperidol treatment of psychosis and behavioral disturbance will be evaluated in a random assignment double-blind placebo controlled study of outpatients with probable Alzheimer's disease. In addition to standardized rating scales and the tracking of target symptoms, specific strategies will be used to overcome difficulties in following symptom profiles in demented outpatients. The side effects associated with these 3 treatment conditions (low dose, traditional dose, and placebo) will be assessed in 3 areas: somatic side effects, activities of daily living, and level of cognitive functioning, the latter examined with detailed neuropsychological evaluation.

There is a high prevalence of psychosis and behavioral disturbance in AD, and a large number of these patients are treated with neuroleptics. Given the inadequate data on the efficacy and side effects of neuroleptic treatment in this disorder, this study will help determine the risk/benefit ratio of different dosage conditions of haloperidol in the treatment of psychosis and behavioral disturbance in AD.

SR01MH42216-34, Steven Ferris, Ph.D., New York University Medical Center, "AD Caregiver Well-Being, Counseling, and Institutionalization", \$205,861

Alzheimer's disease (AD), an irreversible neurodegenerative condition, is the most common cause of severe intellectual deterioration in the elderly. This study will test the hypothesis that caregiver well-being can be improved through various support measures, and that this will decrease the incidence of institutionalization of AD patients. The primary goal of this study is to evaluate the effectiveness of a multicomponent treatment approach whose goal is to optimize the condition of the caregiver, with a secondary objective to assess the effectiveness of this intervention in preventing or postponing institutionalization. The specific aims are: 1) to complete the counseling program with 100 randomly selected spouse caregivers of AD patients. A parallel control group of 100 caregivers will also complete the study; 2) to administer a caregiver assessment battery to the treatment and control group at baseline, after 3, 6, and 12 months and every 6 months thereafter. It will include assessment of patient functional status and caregiver burden, mental and physical health, social network and financial difficulties; 3) to evaluate the effectiveness of counseling for improving caregiver well-being, to determine the longitudinal outcome of variables other than treatment, and to assess the influence of treatment and other caregiver variables on ultimate institutionalization. If the results confirm the hypothesis about the utility of treatment, this project will provide an effective model intervention program for assisting and enhancing the well-being of caregivers. Given the greater cost-effectiveness of home care versus institutionalization, the widespread implementation of similar programs would have the potential to have a major impact on reducing the economic burden of AD on individual families and on the federal health care system.

1R01MH47144-01, Norman Foster, M.D., University of Michigan, "Neuropharmacologic Challenges in Dementia", \$65,735

This study will examine the role of acetylcholine and glutamate upon cognition in dementia. The specific aims of the study are to: 1) determine the minimal dose of intravenous ketamine that is needed to induce significant cognitive effects in patients with Alzheimer's disease (AD) and compare the effects of this threshold dose in patients with Huntington's disease (HD), patients with AD, and normals of similar age; 2) examine the clinical effects of doses of intravenous scopolamine that are subthreshold for aged normals in patients with AD and HD, and in normals of similar age; and 3) compare and contrast the pattern of altered cognition induced in patients with AD and HD by the intravenous ketamine and scopolamine injections performed to achieve specific aims 1 and 2.

SR01MH35196-08, Anastase Georgotas, M.D., New York University, "MAOI VS TCA in the Treatment of Geriatric Depression", no FY '90 funds

The overall objectives of this project are: a) To assess the comparative groups of carefully screened depressed patients over age 55 years; b) To investigate the comparative efficacy and safety of nortriptyline (NT) vs phenelzine (PE) vs placebo for successful maintenance in acute phase responders to PE or NT; c) To determine prognostic factors associated with optimal antidepressant efficacy and safety or preferential response to either drug during the acute phase, or optimal maintenance during the follow-up phase.

To accomplish these aims, researchers will do the following: a) Extend the original sample size (N=75) to another 81 (27 per group) carefully screened depressed elderly randomly assigned to NT, PE or placebo following a one-week single-blind placebo washout period. b) Responders, following a period of stabilization (4 months), will be randomly assigned to the same antidepressant to which they have responded during the treatment phase (NT or PE) or to placebo for a period of two years. These further investigations will enable them to validate and extend their preliminary findings and provide important information regarding optimal pharmacological treatment and prophylaxis for this illness.

SR01MH45131-02, Dilip Jeste, M.D., University of California, San Diego, "Risk Factors for Tardive Dyskinesia in Older Patients", \$341,603

Neuroleptic-induced tardive dyskinesia (TD) is a serious public health problem among chronically mentally ill older patients. There have been very few prospective, long-term studies of the incidence of and risk factors for TD in this population. This study will evaluate, over a five-year period, 700 psychiatric patients over age 50. At study entry, these patients will have had less than 1 month of total lifetime neuroleptic exposure, and will be neuroleptic-free for at least a month prior to study entry. The initial assessments will include psychiatric and neurologic examinations (with suitable rating scales), a thorough review of past medical and medication records, a specific clinical evaluation of motor function and of neurologic "soft" signs, a selected neuropsychological test battery, and an instrument assessment of orofacial and limb motor function (including parkinsonism, involuntary movements and voluntary motor control). Patients will be assigned randomly to either haloperidol or thioridazine, and investigators will attempt to maintain them on the same neuroleptic throughout the study. The treatment will otherwise be individualized, with the goal always being to treat the patients with the lowest effective dose. Patients will be reexamined one month after initial assessment and then at 3-month intervals for evidence of TD. The neuropsychological and instrumental assessments will be repeated annually. All these evaluations will be done "blind" with respect to the other data (especially treatment). The main goals of the study are: 1) to estimate the incidence of TD in this older patient population, 2) to determine risk factors for occurrence and precipitation of TD, as well as development of a so-called "malignant" form of TD, and 3) to determine the risk factors for persistence and severity of TD. Statistical methods will include survival analysis with covariates, and stepwise regression analysis. A quantitative neuropathologic study of the brains of the patients who die will be performed. The main strengths of this study are: a large sample size, use of a neuropsychologic test battery, instrumental assessment of orofacial/limb motor function, a comparison of relative risk of TD with two most commonly used neuroleptics, and a neuropathologic study of the brains of TD patients.

1R29MH46625-01, Paul A. Newhouse, M.D., University of Vermont, "Nicotinic Cholinergic Model of Dementia", \$104,773

This is an application for a FIRST award to support studies of the involvement of nicotinic cholinergic receptors in the pathophysiological mechanisms associated with Alzheimer's disease and Parkinson's disease. A series of pharmacological probe strategies will be employed to investigate cognitive, behavioral, physiological, and hormonal responses to manipulations of central nervous system (CNS) nicotinic cholinergic systems. Recent investigations into the nature of cholinergic lesions in the brains of patients with dementia of the Alzheimer type (DAT) and Parkinson's disease (PD), both demented and non-demented, have revealed a major loss of subcortical cholinergic cells and cortical nicotinic cholinergic receptors. Central nicotinic receptors have been shown to release several neurotransmitters including acetylcholine. The loss of these receptors may play an important role in the clinical symptomatology and psychopathology of both disorders by explaining the genesis of so-called "subcortical" deficits in both disorders.

1R29MH47020-01, Charles Morin, Ph.D., Virginia Commonwealth University, "Cognitive Behavior & Pharmacotherapy for Late-Life Insomnia", \$109,264

This study will evaluate the clinical and comparative efficacy of cognitive-behavior therapy and pharmacotherapy for late-life insomnia in 100 adults. A 5 (Group) x 5 (Assessment) split-plot factorial design with repeated measures on the second factor will be used. Prospective subjects will be matched on gender and insomnia severity and randomly assigned to one of the following conditions: (a) cognitive-behavior therapy; (b) pharmacotherapy (temazepam); (c) cognitive-behavior therapy plus pharmacotherapy; (d) drug-placebo; and (e) waiting-list. All treatments will last eight weeks after the initial 2-week baseline period. Treatment outcome will be evaluated across measures of sleep, mood, and neuropsychological functioning. Placebo and wait-list subjects will receive treatment after the initial 8-week experimental phase. Followups will be conducted at 3, 12, and 24 months. The main research questions addressed by this study are: a) Which treatment modality or combination produces the best outcome on subjective and objective sleep parameters? b) What is the impact of improved sleep on mood and daytime performance measures? c) Are there predictors of successful outcome within and across treatment modalities? and, d) How does exposure to drug and non-drug interventions for insomnia impact on long-term use of health-related services?

5R01MH44194-02, Nunzio Pomara, M.D., Research Foundation for Mental Hygiene, Inc., "Nortriptyline Effects on Elderly Depressed", \$131,938

The effects of tricyclic antidepressants on psychomotor and cognitive functioning are of considerable practical significance, particularly in the elderly. Up to 30% of geriatric patients treated with a tricyclic antidepressant develop confusion or delirium. There are no well controlled studies that have assessed the effects of therapeutic blood levels of a tricyclic antidepressant on performance in the elderly. This study addresses these concerns by examining the effects of nortriptyline (NT) on human performance. Using a placebo controlled, double-blind, parallel group design, this study will compare the performance of young and elderly depressed in response to a single dose of NT as well as chronic NT treatment at comparable therapeutic plasma levels. The main goals of the study are:

- 1) Establish the performance effects of a single dose of NT and test whether the magnitude of impairment produced by a single dose predicts impairment with continued treatment
- 2) Establish the performance effects of chronic treatment at therapeutic plasma levels of NT
- 3) Establish whether there is an age-related sensitivity to these effects
- 4) Examine the relationship between plasma concentrations of NT and the magnitude of NT's effects on performance
- 5) Determine if NT is equally efficacious as an antidepressant in young and old

5R37MH43832-02, Charles Reynolds, M.D., Western Psychiatric Institute and Clinic, "Maintenance Therapies in Late-Life Depression", \$748,883

Studies of late-life depression have shown that only 1/4 to 1/3 of patients have a good outcome over 1-3 year follow-up intervals. Most patients experience recurrent episodes of major depression and/or persistent fluctuating symptoms of depression, usually associated with impairment in social adjustment, intercurrent medical disorders, and gradual erosion in the ability to care for self. There is considerable need for controlled studies of maintenance therapies with respect to effectiveness in preventing recurrences, minimizing morbidity, and enhancing social function.

Both interpersonal psychotherapy (IPT) and nortriptyline (NT) have now been shown in controlled trials to be effective and safe in the acute treatment of late-life depression. Researchers will evaluate the efficacy of maintenance IPT (MIPT) and maintenance NT, both singly and in combination, in preventing recurrence of major depression, minimizing symptoms, and enhancing social function. It is hypothesized that active treatments will be superior to a placebo condition.

The major objectives of the study are to determine if recurrence rates differ among maintenance treatments, if time to recurrence differs, and if social adjustment is enhanced among patients in the active treatment cells. Also to be explored are the effects of potential mediating variables on longitudinal course (e.g., number of prior episodes, measures of social support, life events and intercurrent medical illness).

5R37MH34223-12, Richard Shader, M.D., Tufts University, "Applications of Pharmacokinetics in Clinical Psychiatry", \$451,657

A series of clinical and experimental studies is proposed to evaluate the influence of the aging process on the consequences of chronic sedative-hypnotic drug administration and withdrawal. Healthy young and elderly volunteers will receive single 15-mg nightly doses of flurazepam (or placebo), used to represent the group of long half-life accumulating benzodiazepines. Prior to, during, and following 14 days of therapy, subjects will receive a test-dose challenge with a short half-life benzodiazepine (intravenous midazolam, 0.04 mg/kg, oral triazolam, 0.25 mg, or placebo). Following each test dose, plasma levels and pharmacokinetics of the test drugs are assessed in relation to changes in sedation and mood, impairment of psychomotor performance, impairment of memory, and quantitative alterations in the EEG. In analogous experimental studies, 3 groups of male CD-1 mice (young, middle-aged, and old) receive two weeks of continuous infusion (via implantable osmotic pumps) of lorazepam, clonazepam, or vehicle placebo, with infusion rates chosen to produce steady-state plasma concentrations similar to those achieved in humans. During and after the period of infusion, the following variables are quantitated: plasma and cortex drug levels, behavioral activity based on computerized monitoring, in vivo benzodiazepine receptor binding, and in vitro measures of receptor binding and function. An additional series of studies on young, middle-aged, and old CD-1 mice will assess age effects on chronic exposure to tolerance-producing and dependence-producing doses of ethanol, as provided in animals' diet. After 30 days of ethanol (or placebo), tests of behavioral and neuroreceptor function and the effects of challenge doses of clonazepam are tested during active drinking, during acute withdrawal, and during long-term recovery.

5R01MH41734-03, Barbara Stanley, Ph.D., City University of New York, "Informed Consent in Aged Psychiatric Patients", \$135,028

This grant will examine how proxies who consent to psychiatric treatment or research on behalf of an elderly family member make their decisions. As the lifespan increases, the elderly can be more prone to the development of serious illnesses, some of which (e.g. Alzheimer's disease) affect cognitive functions and consequently may impair the ability to make competent treatment decisions (i.e. give a competent informed consent). This project is the first large scale empirical study designed to examine proxy consent in psychiatric treatment and research. A workable model of proxy consent must be developed in order to make treatment decisions for incompetent elderly and conduct research on psychiatric conditions which result in a loss of functional competency.

Two studies are proposed in this project: one in which proxy decision-making for elderly people is examined using hypothetical treatment and research projects; and a second in which elderly patients, about to undergo actual psychiatric treatment or research, and their family members are evaluated to determine when proxies are used, and how they reach decisions.

5R29MH43266-03, Linda Teri, Ph.D., University of Washington, "Treatment of Depression in Alzheimer's Patients", \$143,780

This study will provide a controlled trial of behavioral treatment of depression in DAT. Modeled after a successful behavioral treatment program used with younger and older nondemented adults, this program trains caregivers in skills to alleviate the patient's depression.

Eighty-four Alzheimer's patient-caregiver pairs are randomly assigned to one of three treatment conditions: 1) behavioral intervention to train caregivers in skills to alleviate patient depression, 2) treatment-as-usual attention/support treatment, and 3) waiting-list control. All subjects are assessed pre and post treatment; those in the two active conditions are also assessed at 6 and 12 months follow-up. Primary outcome variables are patient depression, assessed by self-report, diagnosis, interviewer ratings, and caregiver report. Secondary variables include patient's prior psychiatric history and cognitive and functional status, and caregiver's depression, burden and marital satisfaction. Questions to be answered by this study are:

1. Are either active treatments effective in alleviating patient depression?
2. Are either more effective than a waiting-list control? Is one active treatment more effective than the other?
3. Is any one active treatment able to establish and maintain post-treatment gains at 6 and 12 months follow-up? Is one treatment more effective than the other?
4. Is improvement in patient depression associated with patient or caregiver variables, such as patient's prior psychiatric history and cognitive and functional status, and caregiver's depression, burden, and marital satisfaction?

1R01MH46783-01, Larry Thompson, Ph.D., Stanford University, "Cognitive Changes in Older Diabetics Due to Treatment", \$173,313

This is a study to evaluate the effect of treatment for hypoglycemia on cognitive and emotional functioning in elderly patients with Non-Insulin-Dependent Diabetes Mellitus (NIDDM). Preliminary data suggests that poor glycemic control may be associated with decrements in cognitive and emotional functioning in older diabetics. Several studies have suggested that improvement in both neuropathy and retinopathy can occur when good metabolic control is established. The investigators, therefore, will study the effects of treatment on cognitive and affective status, using a two-group (treatment-placebo) double-blind treatment paradigm including a single-blind partial crossover for the placebo group. Patients will be randomly assigned to the drug or placebo groups. After post-treatment measures are obtained, patients in the placebo group will then be crossed over to the active treatment condition; patients in active treatment will continue medication. Findings from the study have the potential to make a major impact on clinical practice, clinical investigation, and basic neurobiological research.

1R01MH45186-01A1, Michael Vitiello, Ph.D., University of Washington, "Aerobic Fitness: Sleep and Its Correlates in the Aged", \$305,143

The investigators seek to investigate the effects of 6 months (at 3 days/week) of aerobic conditioning on sleep, circadian rhythms, and nocturnal growth hormone and plasma norepinephrine levels in 25-30 healthy elderly men (with only age-related sleep decrements), relative to 25-30 healthy elderly men participating in a relaxation/stretching program. It is hypothesized that increased fitness will improve objective (slow wave sleep (SWS), EEG delta-band energy) and subjective sleep quality; increase circadian temperature rhythm amplitude, growth hormone secretion during SWS, and daytime somatomedin-c levels; and decrease nocturnal plasma norepinephrine levels.

This study involves sophisticated physiological measurements which emphasize the role of aerobic training in improving nocturnal sleep in an elderly population. Important measurements will be made of circadian body temperature, growth hormones, somatomedin-c, and plasma norepinephrine, as they may be related to sleep and sleep improvement resulting from aerobic training in this population.

SR01MH37196-08, Larry Thompson, Ph.D., Stanford University,
 "Pharmac-Versus Psychotherapy for Late Life Depression", no FY '90
 funds

This study is designed to compare the effectiveness of pharmacotherapy, psychotherapy and the two combined in the treatment of depression in elderly outpatients. Participants will include 120 community volunteers who are in a clinical episode of definite major depressive disorder or probable major depressive disorder over the age of 60. Participants who have evidence of psychotic depression, or who are in a suicidal crisis will be excluded and referred elsewhere. Participants will be randomly assigned to cognitive/behavioral therapy, drug therapy using desipramine or cognitive/behavioral therapy plus drugs. Forty subjects will be assigned to each treatment condition. The treatment will continue for 4 months on a once a week basis. At the conclusion of therapy, individuals who are no longer depressed will be assigned to one of two maintenance conditions within the respective treatment modality. For example, the successes in the Cognitive/Behavior condition will be assigned to a Lo or Hi maintenance followup condition of 1 session per month or 2 sessions per month respectively. Successes in the drug condition will be placed on Lo or Hi maintenance doses (50% or 100% of treatment dose respectively). Successes in the combined condition will be continued on drug treatment or Lo maintenance psychotherapy alone. Failures in the Cognitive/Behavioral condition will continue to receive psychotherapy; in the drug treatment, psychotherapy will be added; and in the combined condition treatment failures will continue to receive both. The maintenance/failure treatment program will be continued for 4 months. Participants will be evaluated every two months throughout this treatment/maintenance program, and at 6 months and 1 year followup. Evaluations will include both self-report and interviewer ratings of symptoms, measures of functioning in family and other social situations and various measures related to models of depression.

2R01MH35182-07A1, Jerome Yesavage, M.D., Stanford University,
 "Memory and Mental Health in Aging", \$231,248

The general aim of this study is to increase our understanding of the interaction between age and difficulty of training task with the goal of modifying current training programs to enhance their effectiveness for old-old individuals learning relatively challenging mnemonic devices. Researchers will manipulate experimentally the type of pretraining and amount of training time given to subjects to learn a complex mnemonic. To identify factors that predict response to treatment, all subjects will receive a cognitive evaluation prior to starting the training program. Hypotheses are:

- 1: Pretraining. A comprehensive pretraining program will enhance the ability of old-old subjects to profit from complex mnemonic training when compared to an active control pretraining and a placebo control pretraining.
- 2: Training Time. Increased training time to learn a complex mnemonic technique will enhance the ability of the old-old subjects to profit from training. Increased training time when added to a comprehensive pretraining program will have better results than either the comprehensive pretraining or additional learning time alone.
- 3: Predictors of Response to Training. Individual differences in success of training will vary according to performance on tests of cognitive processing. Furthermore, subjects who carry the diagnosis of Age Associated Memory Impairment (AAMI) will not respond as well to interventions as do subjects without this diagnosis (non-AAMI).

These hypotheses will be tested in one large comparative group design study. Each of five conditions will have 100 completed subjects consisting of young-old with and without AAMI and old-old with and without AAMI. All subjects will be screened for AAMI and receive an evaluation of selected cognitive functions before entering the study.

1R01MH45143-01A1, Jerome Yesavage, M.D., Stanford University, "Treatments for Insomnia", \$152,501

This research will study a treatment recently reported to be successful in younger insomniacs, Sleep Restriction Therapy (SRT). SRT improves sleep quality by restricting excessive time in bed and allowing a modest accrual of sleep debt, resulting in consolidated sleep. On the basis of initial success and experience with SRT in the aged, investigators will also employ a Modified SRT (MSRT) as a second treatment. In the MSRT condition subjects will be encouraged to take a single nap, carefully scheduled to occur in a fixed time relationship to their bedtimes. Both SRT and MSRT conditions will be compared to a third condition (Hygiene). The goal is to evaluate treatments for geriatric insomnia not only in terms of improvement of sleep but also in terms of daytime function and performance. Two hypotheses will be tested:

- 1) Efficacy Hypothesis: SRT and MSRT will improve the sleep of community residing elderly by increasing sleep efficiency (SE) and total sleep time (TST), and by reducing latency to sleep onset (SO), the number of awakenings, and wakefulness after sleep onset (WASO), when compared with subjects in the Hygiene condition.
- 2) Side Effects Hypothesis: Subjective daytime sleepiness will increase for subjects in the SRT condition but not for subjects in the MSRT condition; performance on attentional measures will improve in the MSRT condition but will remain the same or decline in the SRT condition.

5R01MH43427-02, Paul Bell, Ph.D., Colorado State University, "Physical Aggression in the Mentally Ill Elderly", \$120,608

This study will examine how physical aggression in the elderly mentally ill impacts patients, program and staff, and policy in the public sector mental health system. Preliminary evidence suggests that assaultiveness in these clients is highly correlated with the presence of organic symptoms. Such patients are much more likely than nonviolent elderly to have a record of multiple admissions.

In collaboration with the Colorado Division of Mental Health, data sets are being assembled to include:

1. Detailed computerized archives for 9 years from Colorado
2. Treatment and outcome data from chart records in Colorado state hospitals for four years
3. Longitudinal data for one year at Colorado state hospitals
4. Archival Colorado state hospital records for 9 years covering staff injuries due to assaults

Analysis of the data sets will permit a study of the clinical and treatment profiles for these clients, an assessment of correlates of onset and treatment outcomes as well as impact on program and staff, and implications for current and potential service system policies.

5R01MH45780-02, Carl Cohen, M.D., Research Foundation of SUNY, "Older Homeless Women", \$128,181

Using survey techniques, in-depth interviewing, and ethnographic techniques, researchers are conducting the first large-scale systematic examination of older homeless women. They are interviewing 250 homeless women aged 50 and older living in the shelters and on the streets of New York City. They are also interviewing key personnel working in programs serving this population. Specific areas being examined are: 1) Demographics data such as mental and physical health; levels of substance abuse; victimization; and social needs and supports; 2) Subsets of the population such as the mentally ill homeless and substance abusers; 3) The different pathways to homelessness; 4) Social networks and their relevance to street survival; 5) Psychological/phenomenological aspects of the homeless condition; 6) The environmental/social context of homelessness; 7) A theoretical model of adaptation. Data collected on older homeless women will be contrasted with data that the P.I. has on other marginal and community populations.

5R01MH42566-03, Leonard Gottesman, Ph.D., Community Services Institute, Inc., "Care for the Old and Mentally Ill in Personal Care Homes", no FY '90 funds

This is a study comparing two strategies for the improvement of mental health care for elderly mentally ill residing in personal care homes in Pennsylvania. One strategy focuses heavily on more individualized care to a limited number of residents, and the other involves broader and more general increases in mental health services to a larger number of homes and residents.

Because of the differences in manpower necessary for the two approaches, they imply a difference in public policy and funding strategy. The more individualized approach is more costly on an ongoing basis, per resident served, although it may be more effective in serving residents' needs. The more general approach is likely to be both less expensive per resident served and less prescriptive of activities by the county mental health authority.

This research is significant because personal care homes are "the new asylums" replacing large state hospitals and, for many, nursing homes, as a long term residence. Personal care homes, however, seldom provide mental health care. As a consequence, large numbers of people may not receive the care they need. As government attempts to provide resources for improved mental health care in these homes, the most effective approach for residents and the most cost effective way to achieve it are of great importance.

1R29MH44787-01A1, Suzanne Meeks, Ph.D., University of Louisville, "CMI Aged: MH Services and Other Factors in Adjustment", \$75,338

This study is examining the adverse and protective factors that affect adjustment over time of long-term mentally ill adults. Previous research indicates that although they may improve on social relations and florid symptoms, significant deficits often remain. Little is known about relations among social, environmental, and health factors that influence utilization and success of mental health services for this population. This study is examining the ways in which changes in symptoms and health status combine with life events and social supports to influence subsequent adjustment, relapse, and mental health service utilization. The design is a three-wave longitudinal study of four age cohorts of long-term patients from age 40 onwards. Four hundred subjects, identified from records of mental health institutions in four catchment areas in Kentucky and southern Indiana will include those with diagnoses of schizophrenia, affective disorders with multiple episodes, and atypical psychoses. An initial assessment of subjects' health, social networks, family environment, psychiatric history and symptom status will be supplemented with family interviews and medical record reviews. Two subsequent waves of data are being collected at three-month intervals. This data will identify factors most likely to lead to functional dependence or relapse, thus, providing specific targets for future intervention.

5R01MH42915-03, James Rohrer, Ph.D., University of Iowa, "Work Stress and Morale among Nursing Home Employees", no FY '90 funds

This study is a prospective investigation of the effect of work stress on four indicators of psychological well-being, or morale, among nursing home employees: burnout, depression, work involvement, and job satisfaction. The influence of morale on turnover and absenteeism will also be examined. The sample will consist of approximately 1,000 nursing home employees engaged in direct patient care at various sites in the Midwest. Assessments will be made of: 1) objective measures of nursing home characteristics including work load and case mix, 2) employee perceptions of the work environment including task routinization, work load and role conflict, 3) work stress arising from the provision of patient care, 4) social support including relations with co-workers and family or friends, and 5) burnout, depression, work involvement, and job satisfaction. The study should contribute significantly to knowledge concerning the cause and consequences of work stress in long-term care organizations. It will provide basis for improving the work environment in nursing homes and should thereby contribute to the quality and effectiveness of health care for the elderly.

SR01MH45293-02, Barry Rovner, M.D., Johns Hopkins University, "A Randomized Trial of Dementia Care in Nursing Homes", \$240,476

The majority of nursing home (NH) patients have mental disorders or behavioral problems, yet no randomized controlled clinical trials exist comparing methods to treat these problems. This study is designed to fill this gap. Investigators will conduct a randomized, controlled clinical trial to test the efficacy of a Psychiatric Intervention Program (PIP) to reduce behavior disorders in demented NH patients. The PIP will consist of three components: 1) Multi-disciplinary clinical rounds directed by a psychiatrist, 2) defined psychotropic drug protocols and, 3) an activities program designed specifically for demented patients.

The primary outcome will be behavior disorder and will be assessed by trained raters masked to patients' treatment assignment and by NH staff unmasked to treatment assignment. Impact of the intervention on secondary outcomes such as use of restraints, cognitive status, functional capacity, family satisfaction, nursing staff job satisfaction and costs of the intervention in relation to other NH costs.

Data from this study will provide information on a new approach to the treatment of behavior disorder in NHs. It is expected that the treatment will be effective at a reasonable cost and has the potential for application in other NHs in the U.S.

SR01MH41766-04, Clare Collins, Ph.D., Michigan State University, "Impact of Alzheimer's Disease on Family Caregivers", \$158,320

The purpose of this grant has been to develop and test the psychometric properties of instruments to measure the following aspects of the experience of family caregivers: caregiver involvement in providing care, reactions to caregiving (burdens, financial consequences, effects on employment, physical and mental health and social functioning); and use of health services. Four broad features make it of special significance. First, a large sample of caregivers of patients with Alzheimer's disease have been identified, detailed intake information on all variables has been collected and study instruments have been tested extensively for reliability and validity. The study represents a cost-effective approach to obtaining longitudinal data. Second, by following caregivers prospectively, they can describe how the course of patients' symptoms and functional limitations influence caregivers' reactions to their caregiving role, their mental health states, the amount and type of care provided, the outcomes of caregiving and caregiver reactions following patient death or institutionalization. Third, they can document the level of informal assistance provided to caregivers and assess the need for, barriers and use of community services. Such longitudinal information will provide highly relevant information to NIMH for use in establishing important features of interventions for family caregivers. Fourth, longitudinal data on these caregivers of Alzheimer's disease patients can be compared to similar longitudinal data, collected by these investigators on caregivers, to physically impaired and cancer patients. Such comparisons will provide major insights into the nature of caregiving. In particular, insight into the significance that a patient's emotional and behavioral dysfunction has on the caregiver can be examined.

2R01MH41781-05, Alfred Dean, Ph.D., San Diego State University, "Social Supports, Aging, and Psychiatric Disturbances", \$207,864

This study is designed to advance existing knowledge of the influence of social supports, along with stressors (life events and role strains) and psychological resources on psychiatric disturbances among adults 50 years of age and over. The study has a number of distinct features essential to further knowledge of the psychosocial dynamics of mental health among the elderly: 1) examination of the potential benefit of various social supports, especially in response to stressful situations for the elderly; 2) longitudinal design; 3) substantial representation of various age groups (including the 85+ group) and equal representation of males and females; 4) use of multiple measures of mental health applicable to the elderly; and 5) use of multivariate techniques to examine key variables and control variables.

In this manner, the study would contribute new and more definitive knowledge with significant implications for clinical assessment, diagnosis, prevention, and intervention.

2R01MH41327-04, Glen Elder, Jr., Ph.D., University of North Carolina, "Careers in Aging in Later Life", \$114,320

American men in the later years of life have a life course which has been shaped by periods of economic boom and bust as well as times of mass mobilization for war. In many respects, the central event is World War II since it put an end to the Depression and set in motion an unparalleled era of economic prosperity. However, very little is known about this event's long-term influence on aging and the old age experience. This is a longitudinal study of later careers and aging patterns among men, 1960 through 1986, who were born between 1905 and 1920, with emphasis on the enduring effects of experiences during World War II--both military and civilian on the homefront. Building upon four years of life record publication in the Stanford-Terman archive, the current study draws upon data from this archive. The study itself began in 1921-22 by recruiting children with high IQs from large school systems in California. Eleven follow-ups were conducted after 1922, the first wave. By 1986, the sample included slightly more than 400 men. About 45 percent served at some point in the armed forces of World War II. Using the full richness of the data archive, the study views retirement and the later years as an ever changing process, responsive to historical change, situational conditions, and individual health or well being. Within a framework of three phases, the research begins by delineating and describing the social careers of aging men and their retirement as a process, beginning in 1960 and extending through 1986. In phase 2, researchers analyze factors that distinguished between the observed trajectories of aging and life transition. Do these trajectories differ for men who entered the service at a relatively late age, when compared to those who entered at an early age? Phase 3 asks what the pathways of aging tell us about coping and adaptation, life styles and health, both psychological and physical. This study should advance our knowledge of the impact that war mobilization has on the aging patterns of men and of the processual nature of retirement.

7R01MH43407-02, Delores Gallagher, Ph.D., VAMC-Palo Alto, "Mental Health Risk Factors in Caregiving: Assessment and Intervention", \$148,079

This is a study of 150 female spouse caregivers, aged 55-80, whose husbands are victims of Alzheimer's disease. Following extensive psychological and medical evaluations at baseline, caregivers will be randomly assigned to one of three intervention conditions: anger management class (AMC); depression management class (DMC), or wait list control (WL), which is a treatment as usual condition. Each class series will run for 10 weeks. Then there will be a Time Two evaluation to measure the extent of pre/post improvement in indices of psychological distress. In addition, those who were in the WL will now be offered the chance to enroll in either class. Evaluations will occur again after 6 months and after 1 year.

Major hypotheses of this study are:

1. Caregivers who participate in either the Anger Management Class or the Depression Management class will show greater improvement in psychological distress.
2. Caregivers with high anger at Time 1 will show greater improvement in the anger outcome, if they receive the AMC rather than the DMC.
3. The mechanism of change from pre to post intervention will be increased self-efficacy perceptions over time in those caregivers who participate in either class series.

2R01MH42096-04, Janice Kiecolt-Glaser, Ph.D., Ohio State University, "Caregivers of AD Victims: Stress and Mental Health", \$308,060

This study seeks support for additional years to continue research examining mental health and immune function effects of caregiving. The completed research shows that caregivers compared to matched controls report rates of infectious illness and depression, and compromised immune function. The goals of the study are to examine these outcomes over time in four subgroups of caregivers: a) those caring for an institutionalized patient, b) those caring for a patient in the home, c) those who were recently bereaved, and d) those who institutionalize the patient in the course of the study.

5R01MH42840-03, Igor Grant, M.D., University of California, San Diego, "Alzheimer Caregiver Coping--Mental And Physical Health", \$232,318

This study is examining, over time, the impact of Alzheimer's disease caregiving on adaptive health outcomes as influenced by coping style, stress, support, and other person-environment factors. A sample of 120 Alzheimer couples (caregiving spouse and patient) are being interviewed every six months over a five-year period. A matched comparison group of 40 noncaregiver couples is being randomly selected from a volunteer population. Data is being gathered on coping activity, health status (psychologic, physical, and physiologic, including immune and endocrine function), social supports, intercurrent life events, perceived burden of caregiving and other situation related stress, past psychiatric and medical history, and functional status of the patient, along with demographic information. It is hypothesized that physical and psychiatric health outcome in the caregiver will relate to rate and qualitative features of progression of the Alzheimer process; but that such health outcomes will be influenced by perceived social support, character of coping activity, intercurrent life events, and background physical and mental health of the caregiver. Further it is suggested that neuroendocrine measures - plasma ACTH, cortisol, beta endorphin, growth hormone and immunologic variables - natural killer cell activity - will help distinguish successful and unsuccessful copers among caregivers, and may predict those who will themselves develop illness. The findings of this study have the potential to delineate the short-and long-term biopsychologic and psychologic consequences of coping with an Alzheimer patient, to identify personal and environmental factors associated with effective coping patterns leading to optimal caregiver outcomes and to explore the association between caregiver coping and deterioration of the Alzheimer's patients' health.

1R03MH46564-01, Jan Greenberg, Ph.D., University of Wisconsin, "Aging Parents with a Mentally Ill Adult Child at Home", \$71,204

This small grant explores the physical and mental health of aging parents caring for an adult child with severe mental illness. Although increasing numbers of aging parents are providing care for a mentally ill child, little is known about the burdens they face, their use of mental health and related services, and the impacts of caregiving on their physical and mental health. The objectives of this study are: 1) to describe the objective and subjective burdens experienced by aging parents caring for a mentally ill adult child; 2) to identify factors that are associated with lower levels of caregiver burden; 3) to describe more precisely the extent to which formal services to the mentally ill adult child and the family serve as a "buffer" to parental stress, and 4) to generate hypotheses for future research on the mental health service needs of aging parents as caregivers to their mentally ill adult children.

This exploratory investigation will be accomplished through a nonexperimental, cross-sectional study of 100 mothers, age 55 and older, living with a severely mentally ill adult child. The data will be compared with a parallel study already conducted on 225 mothers, age 55 and older, who care for an adult or child with mental retardation.

1R03MH46430-01, James Reid, Ph.D., Pennsylvania State University, "Stress, Adaptation, and Successful Aging", \$72,200

This is a small grant to study the process of adaptation in response to the stress experienced by the elderly who move into a continuing care retirement community (CCRC). Researchers propose to study the psychosocial and physiological predictors of successful aging during the process of adaptation to life transitions. The study will focus specifically on the elderly's response to the stress of moving into a continuing care retirement community (CCRC). The research is also intended to provide data that may elaborate a theoretical model of successful aging developed by Paul and Margaret Baltes.

5R01MH42122-03, Leonard Pearlin, Ph.D., UCSF, "Sources and Mediators of Alzheimer's Caregiver Stress", \$282,991

This study examines a range of stressors experienced by Alzheimer's caregivers, the coping strategies they adopt to deal with these stressors, their access to and uses of formal and informal supports, and the consequences of this stress process for symptoms of depression and physical illness. It conceives of the strains encountered within the caregiver role proper as central among the stressors. These strains result from the assistance the caregiver must provide the impaired person in daily activities, from the management of behavior that is potentially injurious or threatening, and from the overloads on time and energy. Connected to the strains in caregiving are associated strains in other areas of life, particularly family conflict, economic hardship, and the cross-pressure of occupational and caregiving demands. In general, it is expected that the more intense the various strains and the more extensively they are diffused into different areas of life, the more mental and physical health will suffer. However, the impact of stressful conditions will be minimized and buffered both by appropriate coping behavior and uses of social support.

To observe the intricate relationships and their change, scheduled interviews will be conducted with a panel of 1,000 caregivers at three intervals. The development of the scheduled interviews will partly rely on qualitative interviews with about 25 subjects.

7R01MH42163-03, Karl Pillemer, Ph.D., Cornell University, "Social Relations of Alzheimer's Caregivers Across Time", \$152,401

This study is investigating changes in the social networks and burden of primary caregivers to elderly relatives with Alzheimer's disease over a two-year period following the initial diagnosis of dementia. In particular, the study will examine the ways in which changes in the structure and function of social networks affect caregiver burden. In addition, the study will examine the ways in which differences in the structure of caregivers' social networks affect the degree of support provided. Further it will explore whether certain types of support and interaction lead to a greater reduction in the stress and burden experienced by caregivers. More general literature on social support and stress suggests that the buffering effects of social interaction and support vary substantially, depending on the characteristics of the relationship between the individual and his or her associates. Researchers will examine how changes in interaction with and support from various network members over time differentially affect caregiver burden. The study will provide a substantial methodological improvement over most previous investigations of caregivers. First, the study will employ a longitudinal design, in contrast to almost all other studies of caregivers, which have been cross-sectional. Second, the study will utilize precise measures of social network structure and function, in contrast to the more general measures of social support and family relations used in previous studies of caregivers. Third, multiple measures of caregiver burden will be employed, including measures of both physical and psychological well-being and subjective stress experienced in providing care.

5P01MH43171-03, M. Powell Lawton, Ph.D., Philadelphia Geriatric Center, "Caregiving and Mental Health--A Multifaceted Approach", \$852,267

This Program Project is examining several large areas of concern regarding the process of caregiving by adult children to impaired elderly family members. Three separate projects will pursue different questions on caregiving stress, drawing from a pool of caregiving families that have already been studied at the Philadelphia Geriatric Center as well as recruiting new families. The three projects will share a common data core, which will be responsible for recruitment, subject selection, data management, training of interviewers, scheduling interviews, quality control of the data, and processing of the data prior to analysis. The common theme of the Program Project is the study of variations in the process of caregiving and the mental health outcomes of caregiving that are associated with marital status, intrafamilial dynamics, length of caregiving and characteristics of the person and her social setting. The Marital Status project will study the correlates and outcomes associated with once-married, multiple-married, never married, widowed, divorced and separated caregiving daughters of widowed impaired older parents. The Family project will study the process and develop new methods for study of family-level influences on and effects on caregiving. The Caregiving Career project will study subjects over an extended period of time, for varying periods including that from the beginning of caregiving until the death of the impaired person. The combined results of the studies will yield new insights on the meaning of caregiving, the family as a unit for study, and the place of caregiving within the context of the caregiver's life. New knowledge will also be gained about women's roles, the differences between caregiving for Alzheimers patients and nondemented physically impaired people within-household and extra-household caregiving, and household constellations as sources of variation in caregiving.

5R01MH43267-03, Peter Vitaliano, Ph.D., University of Washington, "Correlates of Mental Health in Alzheimer Spouses", \$339,684

This multidisciplinary longitudinal study is comparing psychosocial, immunological, and cardiovascular distress, in 70 spouses of mild DAT patients to the distress in 70 age-sex-health status-matched spouses of controls. The controls will themselves be matched to the DAT patients on age, sex, and depression. Assessment will occur twice, 15 months apart.

Using a theoretical model of distress to guide the research, 4 hierarchical hypotheses are being tested: 1) initially and at follow-up DAT spouses will be more distressed than control spouses on all measures; 2) at follow-up DAT spouses will be more distressed than at baseline, whereas mean differences over time in control spouses will be less extensive; 3) over time increases in DAT spouse distress will be partially explained by increases in DAT patient's cognitive/functional decline; however, these relationships will be modified by 3 spouse factors (life stressors, vulnerability, and resources); 4) biological and psychosocial distress will be more correlated at follow-up than at initial assessment; and at both times these relationships will be greater for vulnerable spouses (e.g. hostile/angry, etc.) and less for spouses with resources (e.g., social support and coping). The General Linear Model will be used to statistically test the hypotheses. This research will integrate psychosocial and biological sequelae of stress in DAT spouses.

2P50MH40159-07, Dan Blazer, M.D., Duke University, "CRC/PE for the Study of Depression", \$730,655

The goals of this Center are: first, to define and validate depressive subtypes in late life; and second, to apply the best current investigative techniques to the study of mood disorders, especially depression, across the life cycle. Three investigative techniques will be used: first, subjects will be identified and compared across the life cycle using the current nomenclature (i.e., DSM-III and DSM-III-R); second, grade-of-membership analysis (GOM), a statistical method similar to cluster analysis, will be used for categorizing from which "pure types" can be derived; and third, depressive disorders will be studied longitudinally.

SP50MH40381-05, Eric Caine, M.D., University of Rochester, "CRC/PE for the Study of Psychopathology for the Elderly", \$1,425,645

This CRC/PE endeavors to bring neuropsychiatric research methods to bear upon the study of geriatric psychopathology by focusing thematically upon discrete behavioral disturbances and behavior-brain relationships. Researchers are continuing to pursue the following broad goals:

- 1) establish and conduct multidisciplinary, clinical and laboratory research to further understand the neurobiological bases of abnormal behavior in the elderly
- 2) maintain and strengthen their unique, collaborative research setting, and continue to provide support for case identification and follow-up, biostatistical consultation, and data management
- 3) coordinate research programs in the university which deal with behavior disorders in the elderly
- 4) continue the education and training programs
- 5) support related new research efforts

The CRC/PE is composed of five cores, including Administrative, Data Management/Biostatistics, Research Clinical Assessment, Brain Acquisition, and Education/Training; and four research laboratories, including Psychopharmacology (LPP), Neuropsychology (LNP), Suicide Studies (LSS), and Neuroscience (LNS).

SP50MH43486-02, Steven Ferris, Ph.D., NYU Medical Center, "Geriatric Psychopharmacology Clinical Research Center", \$455,336

This Clinical Research Center has an established group of investigators committed to geriatric psychopharmacology. The Center will encompass existing physical, patient and lab resources as well as relevant ongoing and new research projects. The major goal of the Center is to integrate, expand and facilitate innovative research to extend basic knowledge and improve the pharmacologic treatment of cognitive disorders in the elderly. Normal elderly, Alzheimer's disease patients, and subjects with age associated memory impairment (AAMI) will be included. In addition to expansion of an existing core research program, two new clinical trials will evaluate the relative efficacy of arecoline and nicotine in treating AD and will evaluate the treatment of mild memory impairment in AAMI with phosphatidylserine. A PET study will compare the effects of scopolamine to the PET changes seen in normal aging and AD. An Early Drug Trial Unit will conduct pilot studies on AD patients with the ganglioside GM1, and on a white matter lesion subgroup with the antihypertensive, captopril.

In the Core Research Program, a 700 subject longitudinal database will permit study of the prognosis, course, early diagnosis, and etiology of cognitive decline and related psychopathology in the elderly.

SP50MH40380-06, M. Powell Lawton, Ph.D., Philadelphia Geriatric Center, "CRC/PE Depression in Residential Care Settings" \$656,836

This is a Center for research, research utilization, and research-experience training in depression as it occurs in a residential-care setting for older people. The rationale is based on the idea that depression is a prevalent basis for distress, illness, and disability, and that the problems of nursing home residents in this regard have been relatively ignored. This research program is both multidisciplinary and longitudinal. All five projects will use the same cluster of clinically depressed subjects. The core will function as the screening, assessment, research-design, and data-analytic body, as well as the vehicle through which the precepting and dissemination process occur. The five projects consist of two biological and three psychosocial projects, with joint analytic and interpretative procedures: 1) a study of medical treatment efficacy and diagnostic reliability of the attribution of depressive symptoms in residents with four possible mild "physical" sources of depression: thyroid deficiency, iron deficiency anemia, chronic obstructive pulmonary disease, and those receiving "depressogenic" drugs. 2) a study of the side effects versus therapeutic efficacy of nortriptyline and the usefulness of biological markers. 3) a study of the affective life and its relation to daily events of depressed and nondepressed residents. 4) a study of suicidal ideation, suicidal behavior, indirect suicidal behavior, and psychopathological versus "existential" suicidal motivation in depressed and nondepressed residents. 5) a study of the familial interactions and relationships of depressed and nondepressed people.

3P50MH43444-03S1, Peter Whitehouse, M.D., Case Western Reserve University, "CRC/PE for the Study of Alzheimer's Disease", \$151,000

This CRC will characterize cognitive and psychiatric symptoms of a population of Alzheimer's disease patients, follow them longitudinally, and explore the relationships between alterations in adrenergic and serotonergic markers in life and in death with the clinical features. The goal of this Center is to contribute to a better understanding of the biological basis of the cognitive and behavioral manifestations of AD, which will lead to better diagnostic and therapeutic approaches. This goal will be accomplished through six cores: clinical, clinical pharmacology, neuroimaging, neuropathology, data management and analysis, and administrative. Five specific research projects are included: 1) biochemical assessment of serotonergic and noradrenergic markers in blood platelets; 2) the role of adrenergic and serotonergic systems in the regulation of cortisol secretion and glucocorticoid receptor number; 3) post-mortem alterations in cortical, adrenergic, and serotonergic binding sites; 4) description of the pathology of the locus coeruleus and raphe nuclei; and 5) studies of the neural control of blood-brain barrier regulation.

5P50MH40041-07, Jerome Yesavage, M.D., Stanford University, "CRC for the Study of Senile Dementia", \$478,800

The purpose of the Clinical Research Center for the Study of Senile Dementia (CRCSD) is to develop innovative studies of patients with Primary Degenerative Dementia (PDD), integrating five different specialty areas. A major theme of the CRCSD is to identify areas of "excess disability" in PDD patients which may be alleviated to improve functional status. The projects are:

Biochemical Component (Project 1): This component is attempting to identify cerebrospinal fluid (CSF) biochemical markers for senile dementia which may be useful in the differential diagnosis of early forms of the disease from normals with depression. Particular attention will be directed towards newer peptide markers such as myelin basic protein, glial fibrillary acidic protein and S-100 protein.

Electrophysiologic and Brain Imagery Component (Project 2): This component is using measures of electrophysiology and brain imagery to follow the natural course of PDD with the intention of developing better methods of establishing diagnosis and prognosis.

Sleep Component (Project 3): This component is studying the relation of disturbed sleep, altered sleep-wake cycles, apneic episodes, daytime sleepiness, and "Sundowning," or nighttime confusion, to excess disability in PDD patients. For the first time a careful assessment of the clinical efficacy of several commonly used medications for "Sundowners" will be undertaken.

Medical Component (Project 4): This component is studying the relation of medical illnesses which develop as PDD progresses to excess disability in demented patients.

Psychosocial Component (Project 5): This component is studying the course of psychosocial needs of caregivers of PDD patients and will attempt to develop model programs for treating depression in this group.

One hundred and fifty patients with PDD and 108 controls will be followed for at least two years and evaluated on core cognitive/behavioral measures using specialized testing by each Project. Each Project will test important hypotheses within its specialty; however hypotheses bridging specialized areas will also be tested, e.g., whether spinal fluid markers relate to sleep disorders.

1K07MH00793-01A1, Sanford Finkel, M.D., Northwestern University, Geriatric Mental Health Academic Award, \$112,590

The purpose of this academic award is to prepare the nominee to function as a researcher in the area of treatment of mental illness and behavioral dysfunction in the elderly and as a resource person to help develop other researchers in the academic environment. The project designed by the grantee is a study of the use of neuroleptic medication (thiothixene) in the treatment of agitation in a nursing home. Each subject will spend four-month periods on steady-state, PRN, and no medication. Subjects will be evaluated before, during, and after trials using a variety of scales and measures. The grantee has an excellent group of supervisors and consultants with expertise in a variety of areas related to research in geriatric psychiatry.

1K07MH00816-01, F.M. Baker, M.D., University of Texas Health Science Center, "Geriatric Mental Health Academic Award", \$106,540

With this Geriatric Mental Health Academic Award, Dr. Baker proposes to complete specific course work in geriatrics at her institution. She will complete a pilot study during the first and second years of the award and in the third year of the award she would submit her first grant. In addition to working with Dr. James W. Maas as her supervisor, Dr. Baker proposes to work with Dr. Barry Gurland and his staff as well as participating four times per year in the Inter-University Consortium. Dr. Baker plans to complete the following goals at the end of three years: 1) complete formal course work in the biology of aging, 2) complete two pilot studies: delirium in surgical patients and the development of mental health screening instruments in the Hispanic elderly, 3) complete and submit a grant entitled "The Assessment of Cognitive Impairment and Depression in a Tri-Racial Population of San Antonio," and 4) begin redesigning the existing Geriatric Psychiatry Program in the context of her visits to various models of Geriatric Psychiatry Programs.

SK07MH00748-03, Yeates Conwell, University of Rochester, "Geriatric Mental Health Academic Award", \$117,450

This Geriatric Mental Health Academic Award is enabling the P.I. to undertake a series of investigations of suicide in the elderly. The research is multidimensional and includes epidemiological, clinical/descriptive, and neurobiological perspectives. Each dimension will be studied in samples of elderly suicide attempters, completed suicide victims, and control populations.

The P.I. is also taking courses, studying independently, and seeking expert consultation in areas relevant to the investigation of suicide and late-life affective disorders. In addition to his own program of suicide research, he will lead a collaborative multidisciplinary effort to more fully understand suicidal behavior from social and environmental perspectives.

The Department of Psychiatry, University of Rochester School of Medicine and Dentistry, through its NIMH Clinical Research Center for the Study of Psychopathology of the Elderly, is committed to developing a major multidisciplinary program studying affective disorders and suicide in the elderly. With the support of this Geriatric Mental Health Academic Award, the P.I. will develop and direct these efforts.

SK07MH00792-02, Carolyn Hoch, Ph.D., Western Psych. Institute., Geriatric Mental Health Academic Award", \$69,599

During the period of this new Geriatric Mental Health Academic Award, Dr. Hoch is systematically expanding her investigative capabilities through a program of interdisciplinary research and advanced education and training. Her research activities are being integrated with her professional nursing responsibilities and will enhance her skills in sleep research and psychometrics. Her independent investigative development is being accomplished by the following activities:

1. training at 3 major sleep research centers;
2. academic studies in advanced research design and measurement;
3. research consultation and teaching;
4. independent study with experts;
5. attendance at national scientific research conferences;
6. implementation of a research program.

The objectives of the three year research program are to 1) elucidate the impact of sleep apnea on the cognitive, affective, and behavioral functioning of elderly individuals with probable Alzheimer's disease; and 2) to develop a nursing assessment instrument designed specifically for use with Alzheimer's patients. Two complementary studies will be simultaneously conducted, "Sleep Apnea and Mental Deterioration in Alzheimer's Disease" and "Alzheimer's Assessment: An Adaptation Instrument".

5K07MH00821-02, Charles Kellner, M.D., Medical University of South Carolina, Geriatric Mental Academic Award, "Neuropsychiatric Aspects of Depression in the Aging", \$88,330

The goal of this award is to train the grantee to be an expert academic clinician/researcher in the field of depression in the elderly. He is training faculty and residents in the Southeastern region of the United States and is continuing his career as an academic neuropsychiatrist. The program has four components: 1) training in geriatric medicine; 2) advanced training and research in electroconvulsive therapy, including a specific research proposal entitled, "Weekly versus Three-times-per-week Electroconvulsive Therapy in the Treatment of Geriatric Depression"; 3) training and research in the brain imaging techniques of Magnetic Resonance Imaging (MRI), Positron Emission Tomography (PET), and Brain Electrical Activity Mapping (BEAM); and 4) training in research methodology and biostatistics. For each of these four components, a program of formal courses, consultation with national experts, clinical work, teaching and research activities is being carried out.

5K07MH00823-02, Daniel Plotkin, M.D., UCLA, Geriatric Mental Health Academic Award, \$115,340

The purpose of this academic award of advanced study and supervised experience is: 1) to support and enhance development of the investigator in geriatric psychiatry and in delivery of mental health services to the elderly; 2) to implement at UCLA an intensive study of geriatric mental health care delivered via partial hospitalization; and 3) to foster the training and cooperative involvement of students and faculty in psychiatry and other departments at UCLA in geriatric psychiatry, partial hospitalization, and mental health services research through teaching, consultation and dissemination of information.

5K07MH00733-03, Pierre Tariot, M.D., University of Rochester, "Geriatric Mental Health Academic Award", \$115,922

This award is assisting the grantee in his development as a researcher who can devise and validate new investigative strategies, a developer of other researchers, and an introducer of research findings in mental disorders of the aging. His development is being guided by 3 major themes. The first is acquiring expertise in the phenomenologic characterization of behavioral disorders in the aged, as well as in measurement of such behaviors, both for prospective phenomenologic studies as well as neuropharmacologic studies. The second theme is clinical neuropharmacology, which he will pursue with a hierarchy of studies that will relate to each other as well as other themes. The third theme is that of prevention, both from pharmacologic and non-pharmacologic perspectives.

2K05MH00364-08, George Vaillant, M.D., Dartmouth College, Research Scientist Award, \$105,800

Dr. Vaillant has been performing life course studies using two valuable longitudinal data sets, the College Cohort and Core City Cohort on men. His studies of mental health and its relationship to physical health across the second half of life have led to an important reformulation of the relationship between stress and illness. Both samples have been continuously followed for 45 years. Originally an interdisciplinary study was made of each subject; parents were interviewed; development histories, school records and the health and psychopathology of relatives were ascertained. Psychological and physiological tests were undertaken.

Major questions being addressed by this study are:

- 1) How does preexisting mental health affect maintenance of physical health?
- 2) What familial, childhood and premorbid psychological variables are associated with resilient and vigorous adaptation to life after age 65?
- 3) What is the natural history of marital and occupational careers over the adult life cycle? What is their relation to psychopathology?
- 4) Can defense mechanisms be made operational?

SK05MH00540-05, George Zubenko, University of Pittsburgh-Western Psych, "Psychopathology of the Aging: Cell Membrane Correlates", \$85,987

This research scientific development award employs fluorescence spectroscopy as a tool to probe the biophysical characteristics of blood cell and brain synaptosomal membranes from patients with Alzheimer's disease. Studies of platelet and red blood cell (RBC) membranes may reveal characteristic alterations that may aid in the antemortem diagnoses of AD. The relationship of observed alterations in blood cell membranes from patients with AD to the demographic and clinical characteristics of this group (age at onset, duration, severity, sleep EEG indices) will be investigated. Experiments will also be conducted to determine whether alterations in blood cell membranes from AD patients reflect a generalized platelet or RBC membrane "defect" or a change in the age-distribution of these cells. In addition to this important clarification, these experiments will provide information on cell membrane changes that accompany the normal aging process of peripheral blood cells. The functional consequence of biophysical abnormalities of platelet membranes will be determined by using platelet aggregation as a model system. A parallel study of synaptosomal membranes prepared from fresh, unfixed regions of AD brain will provide information on membrane biophysical properties as correlated with histopathologic reports. It will, therefore, be possible to determine whether any identified alterations in these synaptosomal membrane properties are more widespread than the characteristic histopathologic abnormalities of AD, and whether the membrane changes are likely to antedate neuronal degeneration and cell loss.

SU01MH46281-02, Marilyn Albert, Ph.D., Massachusetts General Hospital, "Genetic Studies of Alzheimer's Disease", \$253,099

The overall goal of this study is to identify sib-pairs with Alzheimer's disease (AD). It is also hoped that many of these cases will have informative family histories in relation to AD, i.e., evidence of dementia in parents and multiple other ancestors. The diagnosis of AD in the index cases will be established by contemporary research criteria. Blood samples will be obtained from sib pairs and all living individuals in large families with AD. Blood will be used for the preparation of genomic DNA and establishment of permanent lymphoblastoid cell lines at the NIMH.

5T32MH18911-03, Eric Caige, M.D., University of Rochester Medical Center, "Geriatric Psychopathology:NRSA Institutional Training", \$118,233

The goal of this project is to establish a multidisciplinary research training program which is coordinated and run through the university's clinical research center. It is preparing trainees to become independent clinical and laboratory research scientists who are equipped to creatively investigate mental disorders of the elderly. It also is preparing investigators to work in university and academic settings, training scientists capable of working interactively with colleagues from other research disciplines to more fully understand the basic-determinants of psychopathology among the aged. The program emphasizes clinical neuropsychiatric, neuropsychological, and psychosocial methodology, as well as basic laboratory approaches to investigating the neurobiological substrates of mental diseases. Principal target patient populations include the elderly who suffer affective, schizophrenic, and progressive neurodegenerative disorders, in conjunction with comparative studies of normal controls. The focus of recruitment and training efforts includes three groups: 1) psychiatrists; 2) nonclinical trainees, such as experimental psychologists, neuroscientists, etc. who have fundamental research skills suitable for studying psychopathological disorders among the elderly, but who have little experience with the wide variety of problems and confounds confronted when studying older patient populations; and 3) postdoctoral trainees from other health disciplines (e.g., nursing, clinical psychology, neurology, or internal medicine), who have substantial professional preparation, but who have limited clinical and research experience dealing with mental disorders among the elderly.

SU01MH46290-02, Marshal Folstein, M.D., Johns Hopkins University, "Diagnostic Centers for Psychiatric Linkage Studies", \$238,021

This is a project to develop a diagnostic center for Alzheimer's disease (AD) and to ascertain families with a proband with AD to serve as a resource for genetic linkage studies.

The aims are:

- 1) develop a diagnostic protocol for the assessment of families with familial Alzheimer's disease;
- 2) determine the appropriate small family configuration for future linkage studies;
- 3) collect 133 families, ascertained through a proband with Alzheimer's disease with one or more sibs who have been examined and classified as probable Alzheimer's disease by NINCDS-ADRDA criteria;
- 4) develop a protocol for the collection of blood samples from these families to allow the establishment of permanent lymphoblastoid cell lines.

SU01MH46373-02, Rodney Go, Ph.D., University of Alabama, "Etiologic Heterogeneity in Familial Alzheimer's Disease", \$204,848

The overall objective of this study is to identify 134 Alzheimer's disease (AD) probands and to recruit all their first degree relatives into this cooperative multicenter study. The probands will be thoroughly evaluated clinically through neurological examinations, metabolic profiles, CSF tests, neuroradiological and neuropsychological tests. All demographic, clinical data, and tests results will be stored in a database and prepared for transfer to the central data coordinating center. Local objectives are: 1) to determine the proportion of FAD cases in the Memory Disorders Clinic which have a FAD gene on chromosome 21; 2) to determine if DNA mutations within the Prion Protein coding regions affect AD susceptibility in cases and their family members; and 3) to determine if certain retrovirus genomes (HTLV) may be involved in the onset of dementia and AD in this population. This study should identify affected pairs of relatives and families for linkage studies and also identify more homogeneous subgroups of AD probands via the new molecular techniques.

ST32MH18905-03, Jerome Yesavage, M.D., Stanford University, "A Fellowship in Mental Health and the Aged and Dementias", \$53,356

The purpose of this fellowship is to provide training for mental health professionals planning a career in research on mental disorders of the aging. The program of research involves assessment, evaluation, and treatment development. Training activities are based at an NIMH funded Clinical Research Center for the study of mental disorders of the aging with a particular emphasis on Alzheimer's disease. The theme of the Center is "excess disability", i.e., disability in excess of that attributable to the basic biological characteristics of the illness. Researchers are interested in processes such as sleep disorders in Alzheimer's patients, incontinence, caregiver depression, and other factors which lead to a higher level of disability than might be expected from degenerative biological processes alone. Also, considerable work is being done on biochemical and brain imaging markers of subtypes of the disease which might have differing rates of decline. They also have programs studying pharmacologic and behavioral interventions for patients with all range of cognitive deficits. In addition, they have an active pathological program for postmortem biochemical analyses. They have developed a program which integrates trainees into varied subcomponents of the Center and teaches them to be researchers in a specialty area relating to Alzheimer's disease.

ST32MH18907-02, Joyce Fitzpatrick, Ph.D., Case Western Reserve University, "Geriatric Mental Health Nursing", \$89,200

The specific aim of this project is to develop pre and postdoctoral research training opportunities for nurses who are pursuing careers in geriatric mental health research. Specifically, this program provides a unique opportunity for combining a strong theoretical orientation with an emphasis on research skills for the study of the mental health problems of older adults. The long range goal of the project is to contribute to the pool of nurse researchers prepared in geriatric mental health and to increase the body of knowledge related to the practice of geriatric mental health nursing.

ST32MH19100-02, Ira Katz, M.D., Medical College of Pennsylvania,
"Research Training in Mental Health in the Frail Elderly", \$68,234

This is a multidisciplinary, collaborative fellowship program to train new investigators in research on the mental health and psychiatric disorders of the frail elderly. There is a core of tutorials that covers the areas of geriatric psychiatry and psychology, clinical gerontology, and research methods. Trainees participate as research apprentices in one of the ongoing projects. After the orientation phase, the focus of the program will be on supervised independent research and individualized coursework. Unique features of this program include the focus on the frail elderly, locations of the program within an affiliation between a service setting and a medical school, the existence within this setting of active interdisciplinary, collaborative research involving the program faculty and established access to subjects including large residential and community populations.

1T32MH19132-01, Gerald L. Klerman, M.D., Cornell Medical Center,
"Post Grad. Research Training in Geriatric Affective Disorders", \$77,004

This is a research training grant of three post-residency psychiatrists in geriatric affective disorders within the academic setting of the Department of Psychiatry of Cornell University Medical College. The training period is for two years with a focus on the clinical research experience supervised by a senior faculty preceptor. The research experience is supplemented with a core curriculum of lectures, seminars reviewing current clinical knowledge and research in late onset depression, depression of dementia, primary and secondary mania, sleep problems of geriatric depression and somatic treatments of these states. A clinical experience relevant to the research training will be included for at least one of the two years. The major training facilities will include the Geriatric Division, the Geriatric Specialty Clinic, the Sleep-Wake Disorders Clinic, and the Geriatric Division Laboratory of the New York Hospital-Cornell Medical Center, Westchester Division which is committed to academic excellence in Geriatric Psychiatry.

The primary focus of this grant is on the preceptor-trainee relationship in which the preceptor serves as a scholarly model, supervises the trainee's research, assists the trainee to formulate and develop a research project, and provides collegial criticism of the trainee's written and oral representations of the research data.

ST32MH19104-02, Larry Thompson, Ph.D., Stanford University,
"Research Training in Mental Health and Aging", \$49,506

This program is implementing a one year full time broadly diversified training experience in geriatric research focusing on mental health problems of the aging for doctoral level psychologists. Intensive research experience will be offered in one of four tracks: neuropsychology, assessment and psychotherapy, behavioral medicine, and community outreach prevention. Trainees gain experience in data collection and management, statistical analyses of various types of data, and the opportunity to co-author paper presentations and publications in professional journals. Criteria for acceptance focuses on research interests of trainees, their potential for an academic career in geropsychology, and performance within graduate school training.

ST32MH18904-03, Steven Zarit, Ph.D., Pennsylvania State University,
"Training in Research on Mental Health and Aging" \$82,969

This program provides training in research on mental health and aging. Course work, colloquia, and supervised research experience provide students with training in substantive areas of research on the mental health of older people and with appropriate research methodologies. Faculty preceptors provide expertise in 4 areas: 1) assessment; 2) intervention research; 3) behavioral genetics; and 4) research methodology. Trainees choose a primary and secondary preceptor with whom they develop research projects addressing these topics. Predoctoral trainees work toward completion of requirements for their Ph.D., including appropriate course work, doctoral examinations, and dissertation research on a topic on mental health and aging, guided by a faculty member of this training program. Postdoctoral fellows develop a research program in conjunction with training faculty, supplementing their research activities with course work, as appropriate, to fill in gaps in their previous training.

SUMMARY STATEMENT
(Privileged Communication)

APPLICATION NO: 1 R01 MH42575-01A1
 REVIEW GROUP: PCB 2 GROUP: DUAL: CLINICAL BIOLOGY SUBCOMMITTEE
 MEETING DATE: FEBRUARY 22-24, 1988 PRG CL CD: AF DUAL PRG CL CD:
 INVESTIGATOR: *John Dwyer* (BUTTERS, NELSON M) DEGREE: PHD
 ORGANIZATION: UNIVERSITY OF CALIFORNIA, SAN DIEGO RFA:
 CITY, STATE: LA JOLLA, CALIFORNIA REQ. START DATE: 07/01/88
 PROJECT TITLE: COGNITIVE AND MRI CHANGES IN AFFECTIVE DISORDERS
 RECOMMENDATION: DEFERRAL
 SPECIAL NOTE: 20-HS INV.-NO EXEMPTION DESIGNATED
 10-NO LIVE VERTEBRATE ANIMALS INVOLVED

PROJECT YEAR	DIRECT COSTS REQUESTED	DIRECT COSTS RECOMMENDED
01A1	155,413	
02	175,230	
03	174,803	
04	181,297	
05	201,058	

APPLICANT'S ABSTRACT:

The proposed study will use clinical, neuropsychological and neuroradiological techniques to characterize cognitive deficits associated with unipolar and bipolar affective disorder. Specifically, the cognitive deficits associated with major depression and their longitudinal course in bipolar and unipolar affective disorder will be studied. The trait affiliation will be obtained through follow-up retesting and reimaging. The association of these cognitive abnormalities with MRI determined brain abnormalities will be investigated as will the course of the MR abnormalities themselves. To fully characterize the cognitive deficits associated with affective disorder, the extent to which they are similar to cognitive deficits in Huntington's Disease and dissimilar to those of Alzheimer's Disease will be determined. Comparison of structural findings between patients with affective and neurologic illness will be conducted. Based on pilot data and reports of previous investigators, it is predicted that bipolar, and possibly unipolar affective disorder, will be associated with persistent, mild cognitive deficits similar to the subcortical dementia of Huntington's Disease and will be present in conjunction with specific MR abnormalities. The specific MR abnormalities in the affective disorder patient are predicted to be decreased size of neostriatal structures and a higher rate of subcortical signal hyperintensities.

FINAL ACTION: May 16-18, 1988

Application Number: 1 R01 MH00493-01A2
 Review Group: **HEK**
 Meeting Date: **RES SCIENTIST DEV REVIEW COM**
 OCT. 30 - NOV. 1, 1985
 AF-D
 Investigator: **AVERT, DAVID H**
 Degree: **MD**
 Position: **ASSOCIATE PROFESSOR**
 Organization: **UNIVERSITY OF WASHINGTON**
 City, State: **SEATTLE, WA**
 Requested Start Date: **04/01/85**
 Project Title: **EEG SLEEP AND TEMPERATURE RHYTHM IN PRIMARY DEPRESSION**
 Recommendation: **APPROVAL (UNANIMOUS)**
 Special Note: **Outside Opinion**
30-HS INV.-CERTIFIED, NO IRG CONCERNS OR COMMENTS.
10-NO VERTEBRATE ANIMALS INVOLVED.
 Priority Score: **184**

PROJECT YEAR	DIRECT COSTS REQUESTED	DIRECT COSTS RECOMMENDED
01A2	56,570	56,570
02	58,864	58,864
03	64,864	64,864
04	64,864	64,864
05	64,864	64,864

APPLICANT'S ABSTRACT:

With this ADWHA NSDA, I will develop expertise in methodological and statistical aspects of circadian rhythms and EEG sleep analysis while conducting research on patients with major depression. The first study will study these variables in elderly (age 75+) subjects with major depression (N=50), dementia (Alzheimer's type) (N=50), and healthy controls (N=50) in a clinical research center setting. Results from the rectal and oral temperature studies will be compared with EEG sleep results using correlational analyses. In addition, discriminant function analyses will test the ability of these variables to differentiate the groups. The sensitivity and specificity of the best predictor variables will be calculated. In the second study subjects (ages 18-70) with major depression (N=50) and healthy controls (N=50) will have frequent oral temperatures taken in an outpatient setting. Preliminary data suggest that oral temperatures are able to detect abnormalities in temperature variables (best-fitting tau, amplitude, mesor, and acrophase) in depressed subjects and that there is heterogeneity among these subjects. These variables and others will be compared in the depressed patients, while depressed and when recovered, and in controls. Preliminary data also suggest possible subtypes based on these variables. This study will explore these possible temperature rhythm subtypes and their relation to clinical subtypes and other clinical factors. In a test of the phase-advance hypothesis of depression, the third study will "unmask" the rectal temperature rhythm through sleep deprivation in 10 elderly melancholic patients and 10 elderly controls who had been studied in the first study. In the fourth study, the melatonin rhythm, rectal temperature rhythm, and EEG sleep will be studied in 10 patients with seasonal affective disorder, 10 patients with nonseasonal melancholia, and 10 nondepressed age and sex-matched controls.

FINAL ACTION: March 10-12, 1986

SUMMARY STATEMENT
(Privileged Communication)

1201 MH 46240

Application Number: 1 ~~Revised~~ ~~of~~
 DUAL PROGRAM CLASS CODE: AZ-~~00~~ MB DUAL: MH
 ARR -2 (AHR-V1)

Review Group: AIDS & RELATED RESEARCH REV GP SUBCOMM 2

Meeting Dates: IRG: FEB/MARCH 1989
 COUNCIL: MAY 1989

Investigator: *Catania Joseph A.*
 STALL, RONALD D Degree: PHD MPH

Organization: UNIVERSITY OF CALIFORNIA SAN FRANCISCO
 City, State: SAN FRANCISCO, CALIFORNIA Requested Start Date: 07/01/89

Project Title: AIDS RISKS IN A POPULATION OF OLDER AMERICANS

Recommended: APPROVAL Priority Score: 183
 Human Subjects: 30-HS INV-CERTIFIED NO IRG CONCERNS/COMMENTS Percentile: 30.28
 Animal Subjects: 10-NO LIVE VERTEBRATE ANIMALS INVOLVED

PROJECT YEAR	DIRECT COSTS REQUESTED	DIRECT COSTS RECOMMENDED
01	478,324	478,324
02	180,706	180,706

RESUME: This is a strong, carefully developed application for support to investigate specific behaviors related to transmission of the human immunodeficiency virus (HIV) and blood transfusions among older Americans. The knowledge gained will make possible the design of a more effective acquired immunodeficiency syndrome (AIDS) prevention campaign for older Americans. The well-qualified research team, the careful documentation of the need for this research, and the detailed planning of how it should be conducted, all portend a successful outcome.

DESCRIPTION: (Adapted from investigator's abstract). Ten percent of the cases of the AIDS are among persons aged 50 and older. Unfortunately, no reliable estimate exists of the risk for further transmission of HIV within this age group. Needed is a more complete understanding of the sexual practices of older Americans and valid estimates of the proportion of older Americans with a history of blood-transfusions, intravenous drug use, and/or high-risk male homosexual behaviors. The investigators in this project propose to conduct a telephone survey of a national probability sample of 3,500 U.S. men and women aged 50-75 years that will describe the prevalence of high risk behaviors within this age group. First, they will measure the point prevalence of specific behaviors related to HIV transmission and prevalence since 1977 of blood transfusions among older Americans. Prevalence estimates will also be generated separately for AIDS epicenters and for the combined geographical areas that lie outside of the major American centers of the epidemic. Second, using the three-stage AIDS Risk Reduction Model, they will

Date released: 04/13/89 Date Printed: 04/13/89

SUMMARY STATEMENT
(Privileged Communication)

Application Number: 2 T32 MH15750-11

Review Group: BSR
MH BEHAV SC RES REV COMM

Meeting Dates: IRG: FEB/MARCH 1990
COUNCIL: MAY 1990

Program Director: TAYLOR, SHELLEY E Degree: PHU

Organization: UNIVERSITY OF CALIFORNIA LOS ANGELES
City, State: LOS ANGELES, CALIFORNIA Requested Start Date: 07/01/90

Project Title: BEHAVIORAL ISSUES IN PHYSICAL AND MENTAL HEALTH

Recommended: APPROVAL Priority Score: 182
Human Subjects: 32-HS INV.-CERTIFIED, IRG COMMENTS
Animal Subjects: 10-NO LIVE VERTEBRATE ANIMALS INVOLVED

PROJECT YEAR	DIRECT COSTS REQUESTED	DIRECT COSTS RECOMMENDED
11	165,681	165,681
12	177,607	177,607
13	172,716	172,716
14	179,026	179,026
15	184,546	184,546

RESUME: This application requests funding for six predoctoral and three postdoctoral stipends plus support to train research scientists in health psychology. This renewal application will further expansion of a program which has a strong record of training in health psychology. Both predoctoral trainees and fellows will undertake practical field experience as well as didactic course work. A special emphasis will include social support, coping processes, adjustment to chronic disease and disorder, primary prevention (with specialization in AIDS), power and influence in health settings, and ethnic and minority factors in health. The training program, with its emphasis on health promotion and primary prevention promises to expand student opportunities in a critical area of health research. The faculty is quite impressive and the program has been very successful.

DESCRIPTION (Adapted from Applicant's Abstract): The goal of the program is to train research scientists in health psychology, specifically in the application of basic theories and research in psychology to issues of health. The program for predoctoral and postdoctoral fellows includes seminars in health psychology, training in research methodology, practical field experience and supervised research. Special areas of expertise are: social support, coping processes, adjustment to chronic disease and disorder, primary prevention (with specialization in AIDS), power and influence in health settings, and ethnic and minority factors in health. The faculty is composed of 38 individuals from Psychology, Psychiatry, Public Health and other

Date Released: 05/16/90

Date Printed: 05/10/90

Application Number: 1 R01 MH46643-01
DUAL: AG

Review Group: EPS -1
EPIDEMIOLOGIC RESEARCH SUBCOMMITTEE

Meeting Dates: IRG: OCT/NOV 1989
COUNCIL: JAN/FEB 1990

Investigator: RATCLIFF, GRAHAM G Degree: PHD

Organization: UNIVERSITY OF PITTSBURGH
City, State: PITTSBURGH, PA Requested Start Date: 04/01/90

Project Title: AGE-ASSOCIATED MEMORY IMPAIRMENT: COMMUNITY-BASED STUDY

Recommended: APPROVAL Percentile: 20.5
Human Subjects: 30-HS INV.-CERTIFIED NO IRG CONCERNS/COMMENTS
Animal Subjects: 10-NO LIVE VERTEBRATE ANIMALS INVOLVED Priority Score: 122

PROJECT YEAR	DIRECT COSTS REQUESTED	DIRECT COSTS RECOMMENDED
01	248,468	248,468
02	245,964	245,964
03	259,896	259,896
04	238,248	238,248

PROJECT YEAR	DIRECT COSTS REQUESTED	DIRECT COSTS RECOMMENDED
01A1	65,200	65,200
02	64,688	64,688
03	67,328	67,328
04	79,020	79,020
05	72,821	72,821

APPLICANT'S ABSTRACT

Hypersecretion of glucocorticoids occurs in depression and Alzheimer's disease. Recent studies, including our own, indicate that depression is also associated with decreases in lymphocyte glucocorticoid receptor (GR) number and function. The overall goal of this proposal is to compare the regulation of brain and lymphoid GR in response to a variety of modulatory influences to determine if lymphoid GR are indeed a valid model of neuronal GR regulation.

The type II GR will be quantitated in neuronal (hypothalamus, hippocampus and frontal cortex) and lymphoid tissues (lymphocytes, thymus and spleen) as well as in the pituitary using the specific type II GR ligand, ³H-RU 28362. GR measurements include the number (B_{max}) and affinity (K_d) of the receptor, the activation capacity of the GR as determined by a DNA-cellulose assay and the molecular weight of the GR using affinity labelling techniques. GR messenger RNA (mRNA) will also be quantitated using a sensitive ribonuclease protection assay.

The effect of experimental manipulations which approximate the biological abnormalities observed in depression will be assessed for their effect on the proposed GR measurements in the target tissues. Initially, increases in circulating corticosterone levels will be assessed for their effect on GR. Since decreases in brain biogenic amine systems are involved in the etiology of depression, the next set of studies will examine the effect of depleting neuronal levels of serotonin (5-HT) or norepinephrine (NE) on GR regulation. The effect of various antidepressant treatments (ADT), including monoamine reuptake inhibitors, lithium, electroconvulsive shock and monoamine oxidase inhibitors on basal GR measurements will be assessed. The ability of these ADT to normalize any GR changes induced by monoamine depletion regimens will also be determined. The physiological significance of any observed changes in brain GR number will be assessed *in vivo* using dexamethasone-induced suppression of serum corticosterone.

If the proposed studies demonstrate that lymphoid GR faithfully reflect changes in neuronal GR then the clinical usefulness of lymphocyte GR measurements in human disease states, such as depression and Alzheimer's disease will be greatly enhanced. These studies may also provide new insights into cellular and molecular mechanisms associated with antidepressant treatments which may involve GR. Fundamental information about GR regulation and function will also be elucidated.

1. Harry T. Orr
University of Minnesota
5T32 14647-13
"Research Training - Behavioral Genetics"

This grant pays for continuing support for the Behavioral Genetics training program at University of Minnesota. Both pre- and postdoctoral students are served by the program which, during its 20 year history has focused on human behavioral genetics. Both normal and pathological traits are being studied with particular focus upon the genetics and biology of aging and genetic toxicology. Instrumental to these investigations is the application of twin and family study methods which are made possible by the immediate availability of established twin populations, large documented pedigrees for various pathological conditions, and expertise in the area of genetic epidemiology for the design and analysis of such studies.

2. Stan Kaul
Yale University
2T32 14235-16
"Research Training in Mental Health Epidemiology"

This grant supports a well-established research training program in mental health epidemiology which began in 1975 and is in its fifteenth year. The purpose of the continuing program is to provide advanced research training in three areas of epidemiology: (1) psychosocial (risk factors for physical health outcomes); (2) psychiatric (adult and child); and (3) genetic. Changes in focus which will characterize the next five years of the program include a greater emphasis on genetics, child psychiatry, and substance abuse.

GLASER, RONALD

2

1 T32 MH18531-01

funded research programs, as demonstrated by publications and grant awards outlined in the proposal. We will take advantage of the expertise in these three laboratories to provide an environment for training postdoctoral fellows in the field of psychoneuroimmunology, such that each individual should be competitive for faculty positions in departments of Psychiatry, Psychology, or Microbiology/Immunology and, as part of their responsibilities, establish a functioning and productive research program in psychoneuroimmunology.

RESUME: Application is for five years of support for a new postdoctoral clinical research training program in psychoneuroimmunology. The program is centered in the Department of Medical Microbiology & Immunology in The Ohio State University College of Medicine. Dr. Ronald Glaser, Professor and Chairman of the Department, is the program director.

This is an important and rapidly developing new research field and the Committee judged the overall training program proposed to offer a rather unique opportunity to provide some excellent training for future researchers in it. The program is not without a clear gap at the present time in its coverage of the neuroscience aspects of this interdisciplinary field, however, and for this reason the Committee believed that the application clearly merits a recommendation of approval at high priority, but for a reduced period of four years and for only two stipends each year rather than the requested three.

SITE VISIT: The program was visited by Dr. Nicholas Hall, Dr. Fritz Henn, Dr. Myron Hofer, Dr. Fred Altman (NIMH) and Dr. John Hammack (NIMH) on February 23, 1987. Information obtained from the site visit discussions has been incorporated into the Critique section.

CRITIQUE AND SITE VISIT REPORT: The proposed program is designed around a central core faculty of three full-time trainers and is centered within the Department of Medical Microbiology & Immunology in the medical school under the chairmanship of Dr. Ronald Glaser, the program director on the present application. The purpose of the program is to train postdoctoral fellows, coming either from doctoral programs in clinical and social psychology or programs in immunology, to be able to initiate and conduct collaborative research on human subjects that seeks to relate stress, coping and psychological factors with changes in immune functioning at the cellular and molecular level. The goals are highly focussed. On the psychological side, under Dr. Glaser's wife, Dr. Kiecolt-Glaser, studies will be limited to naturally occurring stressful situations in humans, such as the repeated course and examination cycles among medical students, separation and divorce among married couples, and being principal caretaker of a relative with Alzheimer's Disease. Population-based psychological assessment instruments will be used (e.g., Hopkins system checklist, SCID, Hamilton, and measures of social support) to detect psychological variables that correlate most closely with the immunological changes during these life event stresses. Immunological measures will be based on Dr. Glaser's research interest in viral provocation of immune responses and will include molecular studies, as exemplified by recent work showing deficits in DNA repair after stress. The possible pathways relating psychological and immunological impact will, for the present, be focused on the endocrine and peptide receptor mechanisms that are currently being studied by

SUMMARY STATEMENT
(Privileged Communication)

	APPLICATION NO:	1 R29 MH44699-D1A1
REVIEW GROUP:	BPN 1 GROUP: B DUAL:	
	CELLULAR NEUROBIO & PSYCHOPHARM SUBCOMM	
MEETING DATE:	FEB./MARCH 89	PRG CL CD: NR-N DUAL PRG CL CD:
INVESTIGATOR:	LOWY, MARTIN T	DEGREE: PHD
ORGANIZATION:	CASE WESTERN RESERVE UNIVERSITY	RFA:
CITY, STATE:	CLEVELAND OHIO	REQ. START DATE: 07/01/89
PROJECT TITLE:	REGULATION OF BRAIN & LYMPHOID GLUCOCORTICOID RECEPTORS	
RECOMMENDATION:	APPROVAL	PRIORITY SCORE: 146 PERCENTILE SCORE: 44.7
SPECIAL NOTE:	10-HUMAN SUBJECTS INVOLVED 30-ANIMALS INV.-NO IRG COMMENTS OR CONCERNS NOTED	

SUMMARY STATEMENT
(Privileged Communication)

Application Number: 1 R29 MH45323-01

Review Group: LCR -2
AGING SUBCOMMITTEE

Meeting Dates: IRG: JUNE 1989
COUNCIL: SEPT/OCT 1989

Investigator: HAIGHT, BARBARA K Degree: PHD

Organization: MEDICAL UNIVERSITY OF SOUTH CAROLINA
City, State: CHARLESTON, SC Requested Start Date: 07/01/89

Project Title: LIFE REVIEW: PREVENTION OF DEPRESSION AND SUICIDALITY

Recommended: APPROVAL Percentile: 0.1
Human Subjects: 30-HS INV-CERTIFIED NO IRG CONCERNS/COMMENTS Priority Score: 108
Animal Subjects: 10-NO LIVE VERTEBRATE ANIMALS INVOLVED

PROJECT YEAR	DIRECT COSTS REQUESTED	DIRECT COSTS RECOMMENDED
01	77,636	77,636
02	76,319	76,319
03	78,526	78,526
04	59,379	59,379
05	58,026	58,026

APPLICANT'S ABSTRACT: This project will examine the use of structured process of life review as a mechanism for the prevention of despair, and the promotion of integrity in a group of newly relocated elderly people who are at risk for depression and suicide. Erickson's framework of the eight ages of man will be used to guide and direct the study. Two hundred and forty subjects who have relocated within the past three months will be selected from twenty varied housing agencies in a tri-county area. Subjects will be screened for depression using the National Institute of Mental Health Diagnostic Interview Schedule (DIS) scale for depression. After depression is ruled out, subjects will be randomly assigned to groups using the Solomon Four Group Design. On hundred and twenty subjects placed in the control group will receive a friendly visit for eight weeks. Research Assistants will use Ivey's Micro-counseling skill in both groups. The dependent variable of despair will be operationalized through tests of depression, hopelessness, and suicide ideation while the dependent variable of integrity will be operationalized by tests of life satisfaction, psychological well-being and self-esteem. Half of the subjects will be pretested on the six dependent variables. All two hundred and forty subjects will be posttested on the six dependent variables at eight weeks, one year, two years and three years. Through repeated testing, the lasting effect of life review as a health promotion and disease prevention modality will be examined. The population experiencing the life review process is expected to adjust to the strain of relocation and maintain increased integrity and decreased despair for at least three years.

Date Released: 09/05/89

Date Printed: 09/06/89

SUMMARY STATEMENT
(Privileged Communication)

APPLICATION NO: 2 K02 NH00510-06

REVIEW GROUP: RHC GROUP: DUAL:
RES SCIENTIST DEV REVIEW COMM

MEETING DATE: FEB. 16-18, 1989 PRC CL CD: NR-B DUAL PRC CL CD:

INVESTIGATOR: FRIEDMAN, DAVID DEGREE: PHD

ORGANIZATION: COLUMBIA UNIVERSITY RFA:

CITY, STATE: NEW YORK NY REQ. START DATE: 09/01/89

PROJECT TITLE: COGNITIVE BRAIN POTENTIALS: NORMAL AND ABNORMAL

RECOMMENDATION: APPROVAL PRIORITY SCORE: 140

SPECIAL NOTE: 30-HS INV.-CERTIFIED NO IRG CONCERNS OR COMMENTS
10-NO LIVE VERTEBRATE ANIMALS INVOLVED

PROJECT YEAR	DIRECT COSTS REQUESTED	DIRECT COSTS RECOMMENDED
06	\$7,150	\$7,150
07	\$7,150	\$7,150
08	\$7,150	\$7,150
09	\$7,150	\$7,150
10	\$7,150	\$7,150

APPLICANT'S ABSTRACT:

This is a competing request for renewal of an ADAMHA Level II RSDA. Event-related brain potentials (ERPs), and concomitant behavioral indices will be recorded from normal subjects during studies of cognitive development and aging and from two clinical populations, schizophrenics and patients with Alzheimer's disease, who display specific cognitive deficits. It is expected that the ERP measures will provide insights into the hierarchy, sequencing and timing of information processing that are much more difficult to infer from behavioral data alone. The main goal in the study of normal subjects is a description and analysis of the changes in the electrical activity of the normally aging brain, with a view toward a better understanding of age-related changes in semantic processing and memory function. In the study of schizophrenia and Alzheimer's disease, the cognitive ERPs will be elicited during tasks designed specifically to tap the functions for which these disordered subjects show deficits. Comparison of the disordered groups' ERPs with those recorded from normal samples will allow an assessment of which stages of information processing are deficient in these populations and should, in turn, allow more precise functional definitions of the endogenous ERP components. During the tenure of the award, the principal investigator will develop greater expertise in the application of topographical methods to the cognitive ERPs and, via collaboration and consultation, will gain additional knowledge in the area of risk research, in the application of cognitive methodology to development and aging, and in the application of ERP technology to patients with localized brain damage.

FINAL ACTION: MAY 22-23, 1989

Application Number: 2 R01 MH32457-12

TDA -2

Review Group: PSYCHOPHARM, BIO & PHYSICAL TREAT SUBCOM

Meeting Dates: IRG: JUNE 1989
COUNCIL: SEPT/OCT 1989 SZ

Investigator: OVERALL, JOHN E Degree: PHD

Organization: UNIVERSITY OF TEXAS HLTH SCI CTR
City, State: HOUSTON, TEXAS Requested Start Date: 12/01/89

Project Title: CLINICAL PSYCHOPHARMACOLOGY COMPUTER LABORATORY

Recommended: APPROVAL Percentile: 1.2
Human Subjects: 30-HS INV-CERTIFIED NO IRG CONCERNS/COMMENTS Priority Score: 104
Animal Subjects: 10-NO LIVE VERTEBRATE ANIMALS INVOLVED

PROJECT YEAR	DIRECT COSTS REQUESTED	DIRECT COSTS RECOMMENDED
12	44,375	44,375
13	42,154	42,154
14	54,969	54,969
15	45,925	45,925
16	47,925	47,925

DESCRIPTION ADAPTED FROM APPLICANT'S ABSTRACT: The long-term objective of this project is to contribute to the quality of clinical psychopharmacology research by providing improved methodology in areas of experimental design, data analysis, assessment and classification. Specific aims include data analytic support for established clinical investigators and collaborative participation in design, administration, data collection, and analysis with younger investigators; refinement of methodology for empirical classification research with special focus on the heterogeneity of schizophrenia; and pursuit of solutions to several statistical methodological problems of current concern in clinical psychopharmacology research. The statistical problems include interim analyses in ongoing clinical trials, multi-stage sampling designs, criteria for confirming the superiority of a combination drug over each of its components, appropriate corrections for multiple tests of significance, and heterogeneity of variance in association with unequal cell frequencies in a non-orthogonal experimental design. Corrections for baseline differences using sample delta scores, percentage change scores, or analysis of covariance will be evaluated under different conditions with the aim of recommending when each may be most useful in assessing treatment response.

RESUME: This is an application for continuation of support for a project to provide improved methodology in areas of experimental design, data analysis, assessment, and classification, with particular emphasis on clinical psychopharmacology investigations. The committee noted the many contributions

Date Released: 08/29/89

Date Printed: 08/30/89

DEMONSTRATIONS AND CLINICAL TRAINING RELATED TO AGING
PROJECT ABSTRACTS

SUMMARY STATEMENT
(Privileged Communication)

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Application Number: 1 T01 MH19332-01A1

Review Group: STC (02)
SPECIAL TRAINING COMMITTEE EXP. REV.

Meeting Dates: IRG: FEB/MARCH 1990
COUNCIL: AUGUST 1990 ED
RFA MH90-02

Program Director: TERI, LINDA Degree: PHD

Organization: UNIVERSITY OF WASHINGTON
City, State: SEATTLE WA Requested Start Date: 07/01/90

Project Title: MIMM INSTITUTIONAL CLINICAL TRAINING

Recommended: APPROVAL Priority Score: 156

Human Subjects: 10-NO HUMAN SUBJECTS INVOLVED

Animal Subjects: 10-NO LIVE VERTEBRATE ANIMALS INVOLVED

PROJECT YEAR	DIRECT COSTS REQUESTED	DIRECT COSTS RECOMMENDED
01A1	133,200	133,200
02	183,450	183,450
03	181,200	181,200

RESUME: This is a revised application that requests funds for stipends, medical insurance, and training related expenses for two psychology interns, two psychiatry fellows, and two psychology fellows, who will be trained in geropsychiatry in a multidisciplinary program.

This proposal offers an excellent training program that will be overseen and coordinated by an impressive faculty of national stature. However, plans to recruit and retain minority trainees is not articulated, and while the number of interns and fellows who have completed the program is stipulated, their minority status is not.

The Review Committee unanimously recommended approval.

APPLICANT'S DESCRIPTION: The training program is designed to prepare psychiatrists and psychologists for leadership academic careers in geriatric mental health. The program will enable predoctoral and postdoctoral trainees to receive broad-based and specialized training in a variety of clinical and research environments, individualized to their interests, but focusing on geriatric mental health. Trainees will learn to diagnose, treat, and research the major mental disorders of older adults, including cognitive disorders (such as Alzheimer's Disease and other dementias), affective disorders (such

Date Released: 07/04/90

Date Printed: 07/05/90

as depression), and schizophreniform disorders (such as late onset schizophrenia and chronic schizophrenia persisting into late life).

All clinical training sites are under the University of Washington Department of Psychiatry and Behavioral Sciences faculty supervision. These sites include the geriatric programs at the University of Washington Medical Center, Harborview Medical Center, and the Seattle and American Lake Veterans Administration Medical Centers' Geriatric Research, Education, and Clinical Center. Predoctoral trainees will average 30 percent research, 50 percent clinical and 20 percent didactic time; postdoctoral trainees will average 40 percent research, 40 percent clinical and 20 percent didactic time. Trainees will thereby be exposed to all areas of academic work. In addition to training in research, clinical and didactic work, trainees will participate in an ongoing research project; present a scholarly review on a major area of geriatric mental health research; and, if feasible, (depending on level and expertise of entering trainees) prepare a formal research proposal, or submit a manuscript for publication.

The training program is designed to provide stipends for psychiatry and psychology trainees to take advantage of an already strong geriatric training program and prepare academicians in geriatric mental health.

Trainees: The trainees will be two psychology interns, two psychiatry fellows, and two psychology fellows recruited through a variety of mechanisms. A steering committee has been established to select and review all candidates. Students will make application to the specialty program once they have been accepted in the larger psychology and psychiatry training programs. Admission criteria to the program is inadequately described.

Virtually every psychiatry fellow has continued an active career in geriatric psychiatry; many have university teaching positions. Almost all of the former psychology interns and postdoctoral fellows who have completed the program are in the public service area working with older adults, or are teaching in universities.

A specific recruitment program to attract and retain minority trainees is not articulated. The minority status of the interns and fellows who have completed the program is not provided.

Training Facilities: There are strong academic and clinical linkages in facilities that offer specialty training and unique opportunities for research in areas as diverse as neurobiological and psychosocial factors in depression and dementia. Didactic training facilities will be provided through the educational plant and resources available to the university. Research training will be provided through the university and the Geriatric Research, Education, and Clinical Center Neuroendocrinology and Molecular Biology of Aging Laboratory at the Seattle Veterans Administration Medical Center. Clinical training will be provided through the University of Washington Medical Center, Veterans Administration Medical Center Geriatric Research Education and Clinical Center, the American Lake Veterans Administration Medical Center, and the Harborview Medical Center.

SUMMARY STATEMENT
(Privileged Communication)

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Application Number: 1 T01 MH19305-01

Review Group: STC (4B)
SPECIAL TRAINING COMMITTEE

Meeting Dates: IRG: JUNE 1989
COUNCIL: SEPT/OCT 1989 ED

Program Director: SKALL, GARY W Degree: MD

Organization: UNIVERSITY OF CALIFORNIA
City, State: LOS ANGELES, CALIFORNIA Requested Start Date: 09/30/89

Project Title: NIMH INST CLINICAL TRG-MENTAL DISORDERS OF AGING

Recommended: APPROVAL Priority Score: 145

Human Subjects: 10-NO HUMAN SUBJECTS INVOLVED

Animal Subjects: 98-ANIMAL CODING NOT APPLICABLE

PROJECT YEAR	DIRECT COSTS REQUESTED	DIRECT COSTS RECOMMENDED
01	99,700	99,700
02	103,200	103,200
03	99,700	99,700

APPLICANT'S ABSTRACT: The proposed program is designed to train psychiatrists and clinical psychologists for leadership roles in rendering mental health care to the impaired elderly. The goals are to train graduates to: (a) achieve clinical excellence in assessing and treating mental dysfunction in the elderly; (b) organize and lead geriatric teams serving hospital and community needs; (c) contribute to the scientific literature in geriatric mental health by designing and carrying out original research. Trainees have the opportunity to develop their clinical skills in specially targeted units which emphasize interdisciplinary team training at both the institutional and the community level. Emphasis is placed on integration of psychological and psychiatric knowledge with medical, neurological, and sociocultural knowledge. Trainees will participate with faculty in ongoing research in geriatric mental health and will complete an independent research investigation by the end of the two-year program.

Trainees entering the program will be licensed physicians with a minimum of 4 years of prior postgraduate training (internship plus 3 years of psychiatric residency) and clinical psychologists who have completed graduate training and internship in programs approved by the American Psychological Association. A total of 4 physicians and 4 psychologists will be trained during the entire project period. Criteria employed in the selection of candidates include demonstrated interest in the field of aging and mental health, as well as interest in and qualifications to pursue an academic career in geriatric

Date Released: 09/13/89

Date Printed: 09/14/89

Small, Gary W.

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1 T01 MH19305-01

psychiatry/psychology. Training facilities include several UCLA clinical sites, especially the Neuropsychiatric Institute and Hospital, the Center for the Health Sciences, and the West Los Angeles Veterans Administration Medical Center, Brentwood Division, as well as several community mental health programs.

RESUME: This application requests support to train psychiatrists and psychologists to provide specialty clinical services to the elderly mentally ill and to participate in the geriatric research. Trainees will be licensed physicians with a minimum of 4 years of prior postgraduate training or clinical psychologists who have completed graduate training and internship in programs approved by the American Psychological Association. A total of 4 physicians and 4 psychologists will be trained during the project period. The program will provide clinical experiences in many different settings including a hospital inpatient geriatric unit, an ambulatory diagnostic treatment center, a VA geriatric inpatient unit, and a geriatric day-care center.

The Committee's general assessment was that this is a well written proposal that addresses the need for training in the priority area of aging. The proposal has several strengths, including the excellent range of clinical settings in which the trainees will be able to work, the outstanding faculty and the generally excellent curriculum. However, a few weaknesses detracted from the proposal's overall quality. For example, there is no emphasis on recruitment of minority students and the training does not indicate attention to cultural issues or sufficient consideration of minority groups. The Committee recommended approval.

CRITIQUE: The Committee identified the following strengths:

1. The program goals are clearly specified and address the overall aim of training psychiatrists and psychologists to be able to provide services to the elderly mentally ill, who constitute a priority population in the RFA.
2. The curriculum is well defined and reflects a good integration of research findings with didactic material.
3. The experiential component demonstrates a well-integrated mix of clinical work in many different, established geriatric settings that will afford trainees with the opportunity to serve different populations of the elderly mentally ill.
4. The faculty is excellent. The members are well trained, are nationally recognized for their publications, and have extensive clinical experience. Additionally, they have a long history of and commitment to training and education.
5. The students have good credentials, and there are clearly defined recruitment procedures.

Committee identified the following weaknesses:

SUMMARY STATEMENT
(Privileged Communication)

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Application Number: 1 T01 MH19362-01

STC (4C) RFA MH89-04
 Review Group: SPECIAL TRAINING COMMITTEE
 Meeting Dates: IRG: JUNE 1989 ED
 COUNCIL: SEPT/OCT 1989
 Program Director: FOX, JEANNE C Degree: PHD
 Organization: UNIVERSITY OF VIRGINIA
 City, State: CHARLOTTESVILLE, VIRGINIA Requested Start Date: 09/01/89
 Project Title: MULTIDISCIPLINARY EDUC IN SCHIZ & PSYCHOGERIATRICS
 Recommended: APPROVAL Priority Score: 140
 Human Subjects: 10-NO HUMAN SUBJECTS INVOLVED
 Animal Subjects: 98-ANIMAL CODING NOT APPLICABLE

PROJECT YEAR	DIRECT COSTS REQUESTED	DIRECT COSTS RECOMMENDED
01	121,592	121,592
02	151,740	151,740
03	181,888	181,888

APPLICANT'S ABSTRACT: The proposed multidisciplinary clinical training program is designed to increase opportunities for collaborative education and practice of masters nursing students and psychiatric residents and to enhance the effectiveness of psychiatrists' and psychiatric nurses' collaboration through and emphasis on integrating (1) physical health, psychiatric and psychosocial rehabilitation care and (2) research knowledge about neurophysiologic dysfunction and other pathophysiologic aspects of mental illness in psychiatric and psychiatric nursing care for schizophrenic and psychogeriatric clients in the public mental health system. Major goals include: (1) To improve the multidisciplinary education and clinical training of psychiatric nurses and psychiatrists in care of schizophrenic-seriously mentally ill adults in the public health system and, (2) To improve the multidisciplinary education and clinical training of psychiatric nurses and psychiatric residents in care of psychogeriatric clients in the public mental health system. Support for eight masters psychiatric nursing (four schizophrenia-serious mental illness and four psychogeriatrically focused) and four psychiatric residents (two schizophrenia-serious mental illness and two psychogeriatrically focused) is requested in this proposal.

RESUME: This grant application seeks support to train eight masters psychiatric nursing students (four schizophrenia-serious mental illness and four psychogeriatrically focused) and four psychiatric residents (two

Date Released: 09/13/89

Date Printed: 09/14/89

Fox, Jeanne C.

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1 T01 MH19362-01

schizophrenia-serious mental illness and two psychogeriatrically focused). The program offers didactic and clinical training.

This program presents a well designed multidisciplinary, collaborative program between psychiatric nursing students and psychiatry medical interns with a highly qualified staff. The program is well connected to other mental health agencies and a majority of graduates work in publicly funded agencies. The Review Committee voted four to two to recommend approval with the revision that 50% of the slots, i.e. two psychiatric residents and four psychiatric nurses, be filled with minority applicants.

CRITIQUE

Strengths: The Committee identified the following strengths.

1. There is strong collaboration between the graduate psychiatric nursing program and the Department of Behavioral Medicine and Psychiatry and Internal Medicine. There are ongoing collaborative research projects and joint appointments in both departments.
2. There are strong letters of support from clinical agencies, State and locally funded agencies, as well as the Commissioner of Mental Health for the state.
3. The goals and objectives are clearly outlined and address NIMH's funding populations. The organization, course content and methods for didactic and clinical experiences relate to the specified goals and objectives.
4. The overall plan provides a diversity of teaching strategies for the nurses and physicians.
5. The faculty are highly qualified and have expertise in their respective clinical areas. They have made major contributions to research and are leaders in working with minority populations.
6. The plan for recruitment is broad enough to provide an adequate number of students in nursing and medicine. There are letters of cooperation from Hampton Institute agreeing to assist in recruiting minority students.
7. 95 percent of graduates of the psychiatric nursing program work in public funded agencies or in universities working indirectly with publicly funded agencies. 75 percent of the psychiatric resident graduates are employed in public mental health positions.

Weaknesses: The Committee identified the following weaknesses.

1. There is no detailed program of study for the psychiatric residents other than their rotation schedule.

This is a well designed multidisciplinary, collaborative program with a highly qualified staff. The Committee made a strong recommendation that 50 percent of the slots, i.e. two psychiatric residents and four psychiatric nurses, be filled with minority applicants.

BUDGET: The budget appears appropriate for the requested grant.

SUMMARY STATEMENT
(Privileged Communication)

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Application Number: 1 T01 MH19255-01

Review Group: STC (4C) RFA MH89-04
SPECIAL TRAINING COMMITTEE

Meeting Dates: IRG: JUNE 1989 ED
COUNCIL: SEPT/OCT 1989

Program Director: HENDRIE, HUGH C Degree: MD

Organization: INDIANA UNIVERSITY
City, State: INDIANAPOLIS, INDIANA Requested Start Date: 09/01/89

Project Title: NIMH INSTITUTIONAL CLINICAL TRAINING

Recommended: APPROVAL Priority Score: 128
Human Subjects: 10-NO HUMAN SUBJECTS INVOLVED
Animal Subjects: 98-ANIMAL CODING NOT APPLICABLE

PROJECT YEAR	DIRECT COSTS REQUESTED	DIRECT COSTS RECOMMENDED
01	125,637	125,637
02	119,134	119,134
03	127,472	127,472

APPLICANT'S ABSTRACT: The purpose of this training grant is to provide support for interdisciplinary training in psychogeriatrics to psychiatric residents and fellows, and masters and doctoral students in psychiatric nursing. This model is appropriate for the care of the elderly population who present with multiple, complex, interlocking medical, neurological, as well as psychiatric illnesses, and their institutional and family caregivers. Sixteen percent of the state's population is 60 years of age or older (and growing); 15-25% suffer from significant symptoms of mental illness and 6% from dementing disorders. Yet, persons over 60 in the state receive only 2 - 4% of all mental health services. A major barrier to providing services for the aged is the availability of professionals prepared to provide geropsychiatric services in a variety of settings. The proposed program builds upon and expands previous elective training opportunities, by formally establishing the interdisciplinary training model in psychogeriatrics between the Departments of Psychiatry and Psychiatric Nursing at Indiana University, utilizing the resources of each, and university and community resources, in a collaborative training effort. The Alzheimer's Disease and Related Disorders outpatient clinic is already an available site for elective training in the psychiatric residency program and the psychiatric nursing program. Additional resources are now available in the Schools of Nursing and Medicine, the university and in affiliated institutions/programs in the community, to support the proposed program. Broad project goals include: (1) develop and implement the interdisciplinary training model in psychogeriatrics at Indiana University,

Date Released: 09/13/89

Date Printed: 09/14/89

Hendrie, Hugh C.

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(2) increase the availability of psychiatric nurses and psychiatrists who are prepared to specialize in psychogeriatrics, and (3) develop linkages between the training program and professionals from other disciplines to provide multi-discipline perspectives on issues related to mental health care of the aged. Student support is requested for 3 masters and 2 doctoral psychiatric nursing students and 2 psychiatric residents and fellows.

RESUME: This grant application seeks support to train three masters and two doctoral psychiatric nursing students and two psychiatric residents and fellows in psychogeriatrics. The proposed program builds upon and expands collaborative programs in psychogeriatrics between the Departments of Psychiatry and Psychiatric Nursing at Indiana University.

This is a well-conceived multidisciplinary, collaborative program offered by a well qualified faculty. It is well connected to other hospitals and clinics for clinical training and the evaluation plan is well designed. The Review Committee voted unanimously to recommend approval.

CRITIQUE

Strengths: The Committee identified the following strengths.

1. This grant shows a true multidisciplinary spirit in the training of psychiatric and nursing trainees. There are joint interdisciplinary seminars and most of the clinical training takes place in a collaborative setting.
2. The faculty is well versed in the subject of geriatrics and encompasses the appropriate medical and nursing specialties. All key faculty have documented clinical expertise with one or more of the targeted populations, numerous scientific presentations and publications, and impressive track records in training and research grant activity.
3. Curriculum and rotations are well spelled out.
4. There are numerous hospitals, clinics and other agencies (including a Law School) available for clinical experiences.
5. The evaluation plan incorporates existing process and product evaluation of the two participating departments for students and faculty. Measures to evaluate the specific objectives are to be developed.

Weaknesses: The Committee identified the following weaknesses.

1. There is some lack of clarity at precisely what level residents will be recruited and whether this will be a fellowship program or part of the fourth year of training.

This program offers an excellent multidisciplinary approach by a well qualified faculty. The evaluation is strong.

BUDGET: The budget appears appropriate for the requested grant.

RECOMMENDATION: The Review Committee voted unanimously to recommend approval.

SUMMARY STATEMENT
(Privileged Communication)

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Application Number: 1 T01 MH19357-01

Review Group: STC (4C) RFA MH89-04
SPECIAL TRAINING COMMITTEE

Meeting Dates: IRG: JUNE 1989 ED
COUNCIL: SEPT/OCT 1989

Program Director: ENGEL, RAFAEL Degree: PHD MSW

Organization: UNIVERSITY OF PITTSBURGH
City, State: PITTSBURGH, PA Requested Start Date: 09/01/89

Project Title: ENRICHING SERVICE TO ELDERLY WITH MENTAL DISORDERS

Recommended: APPROVAL Priority Score: 151
Human Subjects: 10-NO HUMAN SUBJECTS INVOLVED
Animal Subjects: 98-ANIMAL CODING NOT APPLICABLE

PROJECT YEAR	DIRECT COSTS REQUESTED	DIRECT COSTS RECOMMENDED
01	83,666	83,666
02	84,628	84,628
03	85,628	85,628

APPLICANT'S ABSTRACT: This proposal is designed to train Master's level and Doctoral level students in the School of Social Work to provide services to elderly persons with mental disorders. This training combines didactic content offered at the School of Social Work with clinical training within the Geriatric Health Services of the University of Pittsburgh School of Medicine. The Geriatric Health Services (GHS) includes four components: Geriatric Psychiatry Inpatient Program at Western Psychiatric Institute and Clinic (WPIC), Benedum Geriatric Center, Alzheimer's Disease Research Center, and Late Life Depression Program, each using a multidisciplinary team approach to provide clinical services to the elderly. While GHS serves as the primary training site, Master's students will also spend a half-day at the Adult Day Center at Vintage, Inc. This involvement offers students the opportunity to learn in a coordinated fashion within the context of an integrated continuum of care.

At the Master's level, the training program is designed to prepare in each of the three years, four second-year stipend-students as members of multidisciplinary teams for clinical practice with the elderly. The training model includes a didactic component built upon the School's Health/Mental Health concentration and Certificate of Gerontology program. The didactic content emphasizes geropsychiatric practice skills such as diagnostic criteria, assessment, and treatment alternatives with emphasis on the concerns and needs of minority and economically disadvantaged populations. This

Date Released: 09/13/89

Date Printed: 09/14/89

content is integrated into the students' clinical field training in which they develop assessment, treatment, and case-management skills while working with the elderly population.

The doctoral component of the training program is designed to prepare two second year students for advanced practice, supervision and administration, policy, and evaluation research in the area of mental illness and the elderly. The didactic plan for doctoral students builds on and enriches the existing doctoral curriculum and emphasizes practice, administration and policy concerns of mental illness. These students complement the didactic component with the advance practicum, emphasizing clinical understanding of the range of modalities and treatment locations, while increasing their supervision, administration and policy competencies.

RESUME: This grant application seeks support to train four Master's level and six Doctoral level students in the School of Social Work to provide services to elderly persons with mental disorders. The multidisciplinary team approach offers didactic content at the School of Social Work with clinical training at the Geriatric Health Services of the University of Pittsburgh School of Medicine.

This program presents a strong program with a highly qualified faculty and a strong history of recruitment. Goals, objectives, and evaluation plan are well defined. There are didactic and multi-setting clinical settings. There is a creative teacher-learner model within the integrative seminar, whereby Phd students serve in "quasi" mentoring roles for MSW students. The recruitment plan was too narrowly focused. The Review Committee voted unanimously to recommend approval.

CRITIQUE:

Strengths: The Committee identified the following strengths.

1. The educational training plan, with clearly delineated goals and objectives, is well written.
2. The didactic component serves as a framework for clinical practice in the discipline. There is a diversity of clinical sites with relevant clinical experiences.
3. The curriculum for the Masters and Doctoral degrees in social work focuses on the Mental Health of the elderly in a variety of settings.
4. The evaluation process includes a formative research component as well as a summative evaluation component. This process is very explicit and involves all project participants.
5. The faculty are fully qualified. This is an excellent interdisciplinary team of grant participants, with good record of research and grant funded activity in substantive areas.
6. In the recruitment plan, the director plans to draw students from those already in the social work program at both levels. All students involved in the project receive stipends.
7. There is ample evidence to support the applicant's commitment to the project.

SUMMARY STATEMENT
(Privileged Communication)

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Application Number: 1 T01 MH19352-01

Review Group: STC (4B)
 SPECIAL TRAINING COMMITTEE
 Meeting Dates: IRG: JUNE 1989 ED
 COUNCIL: SEPT/OCT 1989
 Program Director: BREITNER, JOHN C Degree: MD
 Organization: DUKE UNIVERSITY
 City, State: DURHAM, NORTH CAROLINA Requested Start Date: 10/01/89
 Project Title: GERIATRIC PSYCHIATRY TRAINING GRANT
 Recommended: APPROVAL Priority Score: 145
 Human Subjects: 10-NO HUMAN SUBJECTS INVOLVED
 Animal Subjects: 98-ANIMAL CODING NOT APPLICABLE

PROJECT YEAR	DIRECT COSTS REQUESTED	DIRECT COSTS RECOMMENDED
01	133,700	133,700
02	136,920	136,920
03	137,712	137,712

ABSTRACT: The investigators propose a training program in clinical and research training in geriatric psychiatry for trainees who have completed at least three years of residency training in psychiatry. The program has strong institutional support and is a continuation, yet restructuring, of a fellowship program in geriatric psychiatry existing at Duke Medical Center since 1966. It offers either a one-year or a two-year experience depending on the needs of the trainees. The one-year program emphasizes clinical training and the two-year experience combines clinical and research training.

The primary training site is Duke University Medical Center, where resources of the Department of Psychiatry and the Aging Center are integrated. Specific sites include: 1) The Geriatric Evaluation and Treatment Clinic, an ambulatory, multidisciplinary geriatric clinic with approximately 300 new intakes per year; 2) Duke University Hospital, with a combined Geropsychiatry/Affective Disorders Inpatient Unit (with the psychiatric consultation-liaison team); 3) The Memory Disorders Clinic (affiliated with the Alzheimer's Research Center); 4) Long-term Care Institutions (long-term care/life care communities); 5) Durham VA Hospital, with the geriatric evaluation unit, psychiatry consultation service, and outpatient clinic; and 6) the Fayetteville Area Health and Education Center. Training and supervision are provided by faculty members at all the training sites. Didactic activities include weekly scheduled conferences in research and

Date Released: 09/13/89

Date Printed: 09/14/89

Breitner, John C.

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1 T01 MH19352-01

aging, multidisciplinary clinical conferences, and supervision. Support is requested for four fellows for three consecutive years.

RESUME: A three-year program of fellowship support is requested for psychiatrists who have completed at least three years of residency training in one of the premier centers in the world for study, treatment, and education in mental health and aging. The Duke University Medical Center program has been continuously involved in training in the area of geropsychiatry and is largely responsible for the emergence of this specialty area of advanced training in psychiatry. The present application restructures a long supported NIMH program, reflecting more explicit integration than in the past with Medicine and Family Medicine. The training program stresses psychotherapy, psychopharmacology, social and psychological gerontology, basic study in the biology of aging, and clinical geriatric medicine. The Committee found this a well written and well documented proposal with excellent educational potential. They unanimously recommended approval.

CRITIQUE: The committee identified the following strengths:

- (1) The proposal meets a tremendous need in the field of geriatrics for special training of psychiatrists with strong potential for leadership in this field.
- (2) The didactic curriculum addresses normative and pathological aspects of aging, as well as current concepts for treatment of the elderly.
- (3) The clinical component of the program is strong, and provides experiences for the trainees in a variety of settings, including evaluation for treatment, inpatient psychiatry, an outpatient memory disorders clinic, retirement homes and communities, and long term care settings.
- (4) Facilities for experiences have both acute care and long term care responsibilities. They represent private and public auspices, and quality of service delivery that would provide excellent training experiences.
- (5) The evaluation plan is detailed and comprehensive.

The Committee identified the following weakness: The application contains no mention of minority recruitment or of cultural and minority issues in the curriculum.

SUMMARY: This proposal, which addresses a high priority need, will focus on developing leaders and researchers in the field of geriatric psychiatry. The application is well written and well documented, but makes no mention of minority recruitment.

BUDGET: The budget appears appropriate.

RECOMMENDATION: The Review Committee unanimously recommended approval of this proposal.

SUMMARY STATEMENT
(Privileged Communication)

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Application Number: 1 T01 MH19213-01A1

Review Group: STC (02)
SPECIAL TRAINING COMMITTEE

Meeting Dates: IRG: FEB/MARCH 1990 ED
COUNCIL: AUGUST 1990 RFA MH90-02

Program Director: SCHNEIDER, LON S Degree: MD

Organization: UNIVERSITY OF SOUTHERN CALIFORNIA
City, State: LOS ANGELES CA Requested Start Date: 07/01/90

Project Title: GERIATRIC PSYCHIATRIC FELLOWSHIP PROGRAM

Recommended: APPROVAL Priority Score: 151

Human Subjects: 10-NO HUMAN SUBJECTS INVOLVED

Animal Subjects: 10-NO LIVE VERTEBRATE ANIMALS INVOLVED

PROJECT YEAR	DIRECT COSTS REQUESTED	DIRECT COSTS RECOMMENDED
01A1	65,000	65,000
02	65,000	65,000
03	65,000	65,000

RESUME: This proposal requests support for a one-year and two-year fellowship program in geriatric psychiatry at the USC School of Medicine. The goal is to produce geriatric psychiatrists who will become teachers, geriatric resource persons, and consultants for the community. The core experience is in four different settings, including a general hospital, an outpatient clinic, a consultation liaison service, and a specialty clinic. Elective experiences are varied and appear to be of high quality. The didactic components are comprehensive and state-of-the-art. The faculty is top-notch and contains national leaders in the field of gerontology. The evaluation procedures are comprehensive. Most of the training occurs in public facilities which serve a large number of impoverished and minority patients.

There are no formal public academic linkages, though this is not unusual for a program of this type. The training record indicates that some trainees proceed to academic careers with geriatric focus. However, most graduates continue working in the field of gerontology. Committee noted that the stipends requested are low and that it may be necessary to augment them with additional monies in order to attract quality fellows.

The Review Committee voted unanimously to approve this proposal.

APPLICANT'S DESCRIPTION: This is a proposal for a one-year and two-year

Date Released: 07/04/90

Date Printed: 07/05/90

fellowship program in geriatric psychiatry at the USC School of Medicine for graduates of psychiatry residencies. The proposal represents the continuation and further development of an existing program previously supported in part by a geriatric postgraduate specialty training program (MH17392).

The purpose of the program is to produce geriatric psychiatrists who will become teachers, geriatric resource persons and consultants for the community in order to improve the level of geriatric psychiatric care in Los Angeles. While maintaining the identity of the fellow as a physician, the program emphasizes a multidisciplinary approach to the care of the elderly, and maintains a community orientation. The role of the community, and aspects of primary and secondary prevention are stressed. The fellow develops administrative, academic and research skills, and develops skills in working in a variety of settings.

Clinical experience is controlled and focused on an inpatient geriatric unit, a consultation/liaison service; a model comprehensive multidisciplinary gerontology service; and an Alzheimer's disease diagnosis and treatment center. Seminars and case conferences in clinical geriatric psychiatry, are provided. In addition, seminars on psychological development, neuropsychology, psychological assessment, social science, geriatric medicine and ethics are provided. Home visits are a part of the program. The program is enhanced with elective clinical and academic experiences. Formative and summative evaluations are used in the assessment of both the program and the trainees. All resources involved in the fellowship program are within the USC system.

Funds are requested to provide fellowship stipends, to enable faculty administration of the program, and for the production of educational materials. Approval and funding of this program will help to create psychogeriatricians of excellent quality who will be active teachers and clinicians. Trainees for this program are physicians who have completed an approved psychiatry residency training program (PGY-V), or those who would be entering the last year (PGY-IV) of an approved program.

CRITIQUE:

Education/Training Program: This is an excellent training program for Psychiatric Geriatric Fellows. The goals of the program include providing knowledge and skills in geriatrics. They are clearly defined and feasible. The faculty are currently engaged in developing guidelines for geriatric psychiatry under the auspices of an American Psychiatric Association-NIMH grant. The curriculum will include up-to-date research findings and scientific knowledge about geriatric psychiatry.

The clinical experiences include a broad variety of clinical settings. The core clinical experiences include an inpatient geriatric unit in a large county hospital, a consultation liaison service in the same hospital, an outpatient geriatric clinic in a rehabilitation hospital and a specialty clinic in an Alzheimer's Disease Diagnosis and Treatment Center. Core experiences include working with a multidisciplinary team and home visits. Elective clinical experiences are numerous and of high quality.

SUMMARY STATEMENT
(Privileged Communication)

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Application Number: 1 T01 MH19461-01

Review Group: STC (02)
SPECIAL TRAINING COMMITTEE

Meeting Dates: IRG: FEB/MARCH 1990
COUNCIL: AUGUST 1990 ED
RFA MH90-02

Program Director: SAKAUYE, KENNETH M Degree: MD

Organization: LSU MEDICAL CENTER
City, State: NEW ORLEANS LA Requested Start Date: 07/01/90

Project Title: GENERAL - ELDERLY; PSYCHIATRY

Recommended: APPROVAL Priority Score: 145

Human Subjects: 10-NO HUMAN SUBJECTS INVOLVED

Animal Subjects: 10-NO LIVE VERTEBRATE ANIMALS INVOLVED

PROJECT YEAR	DIRECT COSTS REQUESTED	DIRECT COSTS RECOMMENDED
01	79,761	79,761
02	79,761	79,761
03	79,761	79,761

RESUME: This proposal requests funding for a Public and Academic Training Program in Geropsychiatry developed by the Department of Psychiatry at LSU and the State Office of Mental Health. It is a comprehensive program that augments existing training for medical students and psychiatric residents. The educational and training aspects of this program are ambitious and address the needs for culturally sensitive medical professionals. The principal investigator is well trained and experienced in geriatric psychiatric education. Public-academic liaisons are excellent, and the program has superior evaluation methods. It would be helpful if the proposal contained documentation of minority recruitment efforts.

The Review Committee voted unanimously to approve this proposal.

DESCRIPTION: The Department of Psychiatry, School of Medicine, Louisiana State University, and the State of Louisiana's Office of Mental Health, Department of Health and Hospitals, have collaboratively designed a Public and Academic Training Program in Geropsychiatry with a special emphasis on minority elderly. This Program is a consequence of the University's efforts in geriatrics and establishes a strong public-academic liaison (see the Affiliation Agreement for shared research and program development/evaluation efforts between the University and State in the Appendix). The programs seek collaborative solutions to improving mental health services with special

Date Released: 07/04/90

Date Printed: 07/05/90

relevance to Louisiana's culturally and ethnically diverse citizens. The LSU/Louisiana affiliation also seeks to recruit, train, update, and retrain physicians and other mental health professionals within public psychiatry. This Training Program builds on the current, privately funded Department of Psychiatry education and clinical activities at the Molderburg Center for Gerontological Studies, Toure Infirmary, New Orleans, as well as the Louisiana Geriatric Education Center at the University. It will develop new seminars and experimental rotations, and will utilize other workshops/seminars and interactive satellite television programs through LSU's Continuing Education and Geriatric Education Center. It will be enriched by conjoint clinical and basic science research efforts and design and evaluation of State-supported service delivery systems for the elderly within Louisiana's rural and urban environments (e.g., the Black Elderly Counseling and Crisis Intervention Program funded by the Division of Mental Health with major support from the Department of Psychiatry, LSU, and the School of Social Work, Southern University, New Orleans). The requested funding will expand didactic, clinical, and research experiences with elderly for medical students (six seniors in eight-week full-time blocks each year) and psychiatry residents (four 3-month blocks in geriatric psychiatry for PGY-4 year). The funding will also partially support two full-time geropsychiatry fellowships (PGY-5), designed to emphasize skill building and career development in research and academic public geropsychiatry by integrating training with the State's public psychiatry career program and emphasizing clinical and consultative experiences within model state programs and public geropsychiatry planners and leaders. Funds are also requested for a part-time training director for this public academic liaison effort. The University and State will fund all other aspects of the total Public Geropsychiatry Program.

CRITIQUE:

Education/Training Program: This program's comprehensive education and training goals include expanding first-year medical students' didactic training in normal and pathological aspects of aging; developing clinical psychiatry electives for fourth-year students; expanding clinical training in psychiatry residency beyond the inpatient focus to include community liaison with nursing homes, research, and administration in public settings; develop two one-year fellowships in geriatric psychiatry; and develop a CD program in geropsychiatry for psychiatrists and mental health professionals employed by the state. The didactic content of these programs appears to be comprehensive, with special attention paid to minority elderly. The program evaluation component includes evaluation of knowledge, attitude, and the clinical program for each level of trainees. Specific instruments are used for several aspects of the evaluation. Less formal evaluation approaches are also used whenever appropriate. The proposal indicates that all proposed activities will begin at the same time, which may be overly ambitious. It would be helpful if the proposal contained a detailed time sequence explaining when and how the various programs can be efficiently implemented.

Trainees: The trainee selection process is clearly delineated. The medical students and psychiatry residents will come from current enrollees at LSU School of Medicine, about 15 percent of whom minority students. The proposal

SUMMARY STATEMENT
(Privileged Communication)

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Application Number: 1 T01 MH19277-01

STC (4C) RFA MH89-04
 Review Group: SPECIAL TRAINING COMMITTEE
 Meeting Dates: IRG: JUNE 1989 ED
 COUNCIL: SEPT/OCT 1989
 Program Director: THOMPSON, LARRY W Degree: PHD
 Organization: STANFORD UNIVERSITY
 City, State: STANFORD, CALIFORNIA Requested Start Date: 09/01/89
 Project Title: NIMH INSTITUTIONAL CLINICAL TRAINING
 Recommended: APPROVAL Priority Score: 116
 Human Subjects: 10-NO HUMAN SUBJECTS INVOLVED
 Animal Subjects: 98-ANIMAL CODING NOT APPLICABLE

PROJECT YEAR	DIRECT COSTS REQUESTED	DIRECT COSTS RECOMMENDED
01	46,896	46,896
02	47,310	47,310
03	47,749	47,749

APPLICANT'S ABSTRACT: This program will implement a one year, full-time, broadly diversified clinical training experience focusing on mental health problems of the elderly. The program is designed to provide training for postdoctoral students in clinical or counseling psychology. Intensive supervised clinical experience will be offered to each Fellow in each of four tracks: neuropsychology; assessment of functional disorders and psychotherapy; behavioral medicine; and treatment of psychological distress in family caregivers. Trainees will rotate through selected programs and sites affiliated with the Division of Gerontology, Stanford University School of Medicine, and the VA Medical Center, Palo Alto, that offer appropriate training experiences. An opportunity to work with chronic mentally ill inpatients who have reached the older age ranges will also be provided in rotations through the Extended Care Service. Trainees will obtain a breadth of experience, along with in-depth experience in one of four tracks, so that by completion of the program, they will have skills in a variety of areas along with significant expertise in at least one of the four domains. In addition to the experiential component, all trainees will participate in core didactic experiences consisting of (but not limited to) the domains outlined above. This will include opportunities for participation in courses at Stanford, along with several specific lecture and workshop series coordinated by the GRECC (Geriatric Research, Education and Clinical Center) of Stanford and the VA focusing on issues in geriatric medicine, team functioning, and psychotherapy for the elderly. Through attendance at quarterly seminars and

Date Released: 09/13/89

Date Printed: 09/14/89

Thompson, Larry W.

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1 T01 MH19277-1

conferences sponsored by the Stanford Geriatric Education Center, trainees will increase their sensitivity to ethnic issues in the assessment and treatment of elderly patients -- since that is the focus of this GEC. Individual and group clinical supervision will be provided in all clinical settings, under the direction of licensed psychologists with particular expertise in that area. Finally, opportunities for research training are available for those who wish to devote extra time to this area. Two postdoctoral applicants from APA-approved programs in clinical or counseling psychology (who have completed APA-approved predoctoral internships) will be recruited each year, with particular attention to recruitment of minorities, as minority elders with mental health problems are a severely under-served population at present.

RESUME: This grant application seeks support to train two postdoctoral trainees a year in counseling psychology with particular attention to minorities, to serve minority elders with mental health problems. There are opportunities for participation in gerontology courses at Stanford, along with other lectures and workshops coordinated by the GRECC (Geriatric Research, Education and Clinical Center) of Stanford and the VA.

This is an extremely well developed, multidisciplinary program at a school with a proven track record. Its clinical settings are state of the art, its faculty highly qualified in many areas, its curriculum broad based. The evaluation is excellent. The Review Committee voted unanimously to recommend approval.

CRITIQUE

Strengths: The Committee identified the following strengths.

1. This grant was well-written with a well-conceived, well-focused, training program.
2. The faculty has broad experience in both research and service to the gerontological population. The faculty is also represented by an interdisciplinary core of instructors.
3. There is a track record for clinical training programs. Fifty-five gero-psychology interns graduated, 34 are employed in the field. At the post doctoral level of 21 individuals, 18 of those are employed at least half-time in gero-psychology.
4. The curriculum is richly multidisciplinary, including neuropsychology, assessment and therapy, behavioral medicine, and emphasis on family caregivers.
5. The evaluation is excellent.

Weaknesses: The Committee identified no weaknesses.

This program has a highly multidisciplinary curriculum and a highly qualified faculty, with a history of service to minority students.

BUDGET: The budget appears appropriate for the requested grant.

SUMMARY STATEMENT
(Privileged Communication)

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Application Number: 1 T01 MH19457-01

Review Group: STC (02) SPECIAL TRAINING COMMITTEE EXP. REV.

Meeting Dates: IRG: FEB/MARCH 1990 ED
COUNCIL: AUGUST 1990 RFA MH90-02

Program Director: GATZ, MARGARET J Degree: PHD

Organization: UNIVERSITY OF SOUTHERN CALIFORNIA
City, State: LOS ANGELES CALIFORNIA Requested Start Date: 07/01/90

Project Title: GENERAL - ELDERLY; PSYCHOLOGY

Recommended: APPROVAL Priority Score: 141

Human Subjects: 10-NO HUMAN SUBJECTS INVOLVED

Animal Subjects: 10-NO LIVE VERTEBRATE ANIMALS INVOLVED

PROJECT YEAR	DIRECT COSTS REQUESTED	DIRECT COSTS RECOMMENDED
01	78,948	78,948
02	79,828	79,828
03	79,078	79,078

RESUME: This is a request for funding of a clinical-aging specialty program in the Department of Psychology at the University of Southern California. It is a five-year program with four years of course work and practice and one year of internship. It embraces a "scientist-professional" model and prepares professionals to provide psychological services, carry out clinically-relevant research, and train other professionals.

Three predoctoral and one postdoctoral students are accepted each year into a community-based program that stresses delivery of mental health services to older adults. Mental health services delivery is integrated with clinical research, focusing on such mental health and aging issues as provision of services to Alzheimer's patients, support for family caregivers, the role of health psychology and concepts of "wellness" in older adults. Particular attention is paid to the mental health needs of minority aged.

The strengths of this proposal include an outstanding faculty, excellent clinical practice sites, a well-planned curriculum, a multidisciplinary environment, an adequate applicant pool, success at attracting minority students, and an excellent record in training students to work with the geriatric population.

The Review Committee voted unanimously to approve this proposal.

Date Released: 07/04/90

Date Printed: 07/05/90

APPLICANT'S DESCRIPTION: Support is sought for pre and postdoctoral training to prepare clinical psychologists to serve elderly persons with mental disorders and to assume positions teaching geriatric mental health. The program will be based in the Department of Psychology at the University of Southern California, which for a long time has had a predoctoral clinical-aging track and has recently instituted postdoctoral training. Academic and research space is in the Seeley G. Mudd Building, where the Department of Psychology is housed. The primary clinical training facility will be the Andrus Older Adult Center, a special on-campus community clinic providing psychological services to older adults. In addition, secondary clinical placements will be available at service agencies which also conduct clinical research, in order to introduce trainees to a broad spectrum of problems of the aged and potential service roles of psychologists. There will be 3 predoctoral and 1 postdoctoral trainees per year.

Special new program emphases include: Alzheimer's disease (diagnosis, anticipating a family caregiver role, twin studies); public mental health policy as regards services to older adults; interface of health and mental health; and application of minority mental health research models.

CRITIQUE: This program requests funds to support the clinical-aging track of the APA-approved clinical psychology program in the Department of Psychology at the University of Southern California. One of its goals is to expose all clinical students to issues with older adults. Another is to prepare psychologists to enter positions in which they will engage in training the next generation of psychologists.

The USC-Older Adult Clinical Psychology program is considered to be one of the premier programs of its kind. It was established nearly two decades ago and has pioneered in training clinical psychologists in the area of mental health and aging, a specialty area in which education is urgently needed. The program benefits from its close ties to psychology as well as to aging. Gatz, the program director, is on the faculty of the Andrus Gerontology Center and maintains close ties with those studying normal aging as well as those involved in aging and mental health. She also maintains close links with Sociology, Family Studies, the Alzheimer's center, and other programs.

Education/Training Program: This is a five-year program consisting of four years of course work and a one-year internship. During the four years of the program, predoctoral students take clinical courses, core courses (including biological, cognitive, social bases of behavior, statistics, research design, history, and systems), aging courses (lifespan, development research methods, biology of aging, attentional processes, and gerontological policy), and clinical aging courses (didactic practicum in psychotherapy with older adults, neuropsychology, and an additional seminar on community mental health and aging or stress and coping). Content on minority issues is included in all required core courses. Training for post-doctoral students contains didactic, clinical practice, and research components.

In addition to academic and research training in the Seeley G. Mudd Building,

YEAR	REQ. DIRECT	REC. DIRECT	GRANT PERIOD
01	49,436	49,436	
02	63,920	63,920	
03	64,538	64,538	

The program is designed to provide a minority mental health specialization in psychological approaches to the elderly with major mental disorders. By appropriate utilization of existing coursework and research options, along with the careful coordination of graded placement experiences, both postdoctoral trainees and predoctoral students in the APA-approved counseling psychology program at the University of Maryland will be able to develop both the generic skills needed for health service providers in psychology as well as the specializations needed for the assessment, intervention and research with aged persons with major mental disorders. The program can serve as a national model of how professional psychology training programs can provide a specialization in geropsychology without diminishing generic skills or inordinately lengthening training programs. The program builds upon (1) the breadth of University of Maryland faculty resources in the psychology department concerning both research and interventions with the impaired elderly, (2) the well-established minority student recruitment and retention program in the psychology department, and (3) the more recent establishment of four types of training and research placements in metropolitan facilities for aged persons, with approximately half of all such residents being ethnic minorities. Placements in this wide range of treatment settings for aged persons - from in-patient medical hospitals, to mobile treatment teams, to assisted living facilities will provide a firm foundation for both assessment and remediation, primarily within a secondary prevention framework, for aged persons as they first encounter major mental disorders. The program will provide (1) a specialized course in the psychological aspects of identification and treatment of Alzheimer's Disease and (2) three workshops focused on the cultural influences affecting assessment and intervention with Black, Hispanic, and Asian-American elderly persons with mental disorders; both of these aspects will be open to current mental health professionals and graduate students in counseling and clinical psychology.

FINAL ACTION: JUNE 13, 1988

RESUME:

The University of Maryland's Department of Psychology requests three years of funding for a minority pre- and post-doctoral mental health specialization in psychological approaches to the elderly with major mental disorders. The applicant proposes to train four pre-doctoral students and five post-doctoral students. The program focuses on primary and secondary prevention and is based on maximum utilization of existing courses and research options with the addition of special geriatric clinical experiences in four types of practicum settings, specialty courses in gerontology/geriatrics, and specialty workshops. The project offers a model for a training sequence in gerontological counseling without adding an extended training period to graduate student training.

The review committee found the application to be a strong, well written proposal that represents a realistic model for achieving specialty training of minority professionals in gerontology, a neglected specialty area. The training program has the strength of adding specialty training without lengthening graduate training time. The committee cited as strengths of the application the availability of existing courses, skilled faculty, and the varied training sites. The committee found the faculty to be well qualified, and the budget is appropriate to the aims of the program. The university has demonstrated a good track record of recruitment and retention of minorities and the proposal for recruitment of students for the geriatric training program is appropriate. The committee also noted with approval the focus on primary and secondary prevention. It did suggest that the applicant pay sufficient attention to the biological aspects of geriatric mental health in their curriculum since testing of the elderly presents special assessment problems. The review committee unanimously recommended approval.

CLIENT SAFEGUARDS:

The proposal raises no special risks to trainees or clients regarding safety or confidentiality.

CRITIQUE:

The review committee found the application to be a very strong, well written proposal that represents a realistic model for a gerontology training program in mental health. The goals of the program are clear and in consonance with the NIMH training initiative. The committee responded enthusiastically to the applicant's intention to develop minority professionals in the neglected area of gerontological counseling. Content and organization of the training appears to be well conceived. A strength of the program is the intention of employing existing courses, available faculty, and established community contacts and institutions to achieve specialty

Revised

SUMMARY STATEMENT
(Privileged Communication)

APPLICATION NO: 1 T01 MH18962-01
 REVIEW GROUP: STC 3 GROUP: B DUAL:
 SPEC TRNG COMM - MINORITY/DISADVANTAGED
 MEETING DATE: APRIL 20-22, 1988 PRG CL CD: ED324 DUAL PRG CL CD:
 PROGRAM DIRECTOR: WYKLE, MAY L DEGREE: PHD
 ORGANIZATION: CASE WESTERN RESERVE UNIVERSITY
 CITY, STATE: CLEVELAND, OHIO
 REQ. START DATE: 07/01/88
 TRAINING AREA: GERIATRIC MENTAL HEALTH - MINORITY INITIATIVE
 RECOMMENDATION: APPROVAL (UNANIMOUS) PRIORITY SCORE: 110
 SPECIAL NOTE: 10-NO HUMAN SUBJECTS INVOLVED
 98-ANIMAL CODING NOT APPLICABLE

YEAR	REQ. DIRECT	REC. DIRECT	GRANT PERIOD
01	126,337	126,337	
02	175,480	175,480	
03	187,195	187,195	

APPLICANT'S DESCRIPTION:

Purpose - This is a three year grant application for support of five minority students in geriatric mental health nursing for each of three years. The major objective of the program is to increase recruitment and retention of minority students in Geriatric Mental Health Nursing and to offer a focus on the unique health needs of minority elderly. The program will provide individualized support to enhance minority student success in creating a geriatric mental health nursing career.

Specific Aims - 1. Increase the number of minority nurses providing mental health services for under-served elderly populations. 2. Provide didactic, scientifically based, clinical experiences for minority students to increase their knowledge of mental disorders of the aging. 3. Increase self-confidence and competence of minority students for leadership positions by providing role models and faculty sensitized to the needs of minorities. 4. Sensitize trainees to needs of minority groups, particularly the minority elderly and provide a theory base for understanding relevant cultural and ethical issues. 5. Provide specialized counseling and tutorial services for educational and emotional support of minority nursing students. 6. Provide opportunities for students to develop and participate in research focused on the target population. The 42 semester hour program of study leads to a clinical major in geriatric mental health nursing with a focus on minority geriatric mental health.

Content health promotion, knowledge development, implementation and evaluation of nursing strategies, concepts of therapeutic interventions for meeting the mental health needs of the aged. Study of Alzheimers' Disease, affective disorders, schizophrenia, anxiety, neuroses and personality disorders, psychopharmacology, minority issues and problems in geriatric mental health, minority health delivery services. Methods Utilizing both direct and indirect care component: students will work with individuals, families and groups and will have experience in consultation, planning, research and geriatric mental health education to develop the clients interpersonal competence and life satisfaction. Supervised clinical experience will occur in a variety of care environments.

FINAL ACTION: JUNE 13, 1988

RESUME

This grant application from the School of Nursing at Case Western University seeks support for five minority students in geriatric mental health nursing for each of 3 years. The objective of the program is to increase recruitment and retention of minority students in geriatric mental health nursing, with a focus on the particular needs of the elderly. These students will have didactic, scientifically based, clinical experiences to increase their knowledge of mental diseases of the aging, especially Alzheimer's disease, affective disorders, schizophrenia, anxiety, neuroses and personality disorders, psychopharmacology, and mental health delivery services. The program will also provide specialized counseling and tutorial services for educational and emotional support of minority nursing students. Trainees will enroll in a 42-semester hour program that focuses on minority geriatric mental health.

The review committee overwhelmingly agreed that this proposal is clear, well-written, complete, and well-organized. The reviewers felt that the program which is already under way is a promising one as well as a unique model for such programs. The committee was enthusiastic in its unanimous recommendation for approval, although it suggested that NIMH staff renegotiate the budget in line with the NIMH grant announcement.

CLIENT SAFEGUARDS

In the reviewers' opinion, there are no perceived risks to either trainees or clients in the proposed program.

CRITIQUE

The committee felt that the goals and objectives of the proposed training program are clear and congruent with the purposes of the NIMH grant announcement. They also are reasonable and clearly spelled out, as is information pertaining to content, methods, and organization of the program. The proposal is easy to follow because of its excellent organization, particularly the addition of tables that provide other tracts in the graduate curricula for comparison. The committee noted a good balance between didactic and experiential components, suggesting extensive experience in developing and maintaining innovative clinical training programs in the past.

The description of the courses and seminars strongly reflect attention to research findings and scientific knowledge within the program. Because there is already a program in geriatric mental health, expanding program offerings to mental health needs of the minority elderly is both very appropriate and feasible.

SUMMARIES OF SERVICES RESEARCH AND RESEARCH TRAINING GRANTS

NIMH/DASR
SERVICES RESEARCH BRANCH
FY 90 Services Research Grants Related to Aging

R29 MH43378 "Geriatric Comorbidity: Hospital Course and Cost",
F.I. George Fulop, M.D., Mount Sinai Medical Center, New York, NY
\$112,264

This research is examining the impact of coexisting medical and psychiatric disorders on the cost and length of hospital treatment of geriatric medical/surgical patients. The subjects are 465 inpatients admitted to the Mount Sinai Hospital with a major Axis I psychiatric disorder. A structured psychiatric diagnostic interview is being used to document comorbidity, severity of illness, and patient physical activity and level of functioning. Economic microanalysis at the individual patient level is being used to document incremental effects of psychiatric comorbidity on hospital resource use and cost.

R01 MH43406 "Mental and Behavioral Problems in Nursing Home Residents" P.I. M.C. Hawes, Ph.D., Research Triangle Institute,
Research Triangle Park, NC \$210,007

This study is examining mental status and disordered behaviors among nursing home residents, the care such residents receive, and factors associated with different strategies used among nursing homes to respond to these problems. The study is also identifying characteristics and practices of nursing homes that manage disordered behaviors without intense use of psychotropic drugs or physical restraints. Most of the research involves secondary analysis of patient-level and facility-level data sets with information on more than 189,000 nursing home residents in 1,965 facilities in three States. Site visits are also planned to nursing homes that have low utilization of psychotropics and restraints relative to number of patients with behavioral disturbances.

R01-MH43214 "Statistical Theory and Methods for Prospective Payment", P.I. Carole Siegel, Ph.D., Nathan S. Kline Institute,
Orangeburg, NY \$174,311

The objective of this project is to develop advanced mathematical and statistical techniques for establishing improved methods of prospective payment for psychiatric cases treated in hospitals. The first issue is how to determine patient groupings that are both clinically meaningful and homogeneous with respect to resource use. The proposed mathematical models will predict length of stay and cost for each patient and generate a classification scheme with as few as possible broadly based patient groups. The second question to be addressed is how to determine prospective payment options that promote positive health care practices while controlling health care costs. A statistical decision theory framework will be developed to test the implications of prospective payment methods for patients, providers, and third party payers.

R01 MH44260 "Effects of Prospective Payment on Care for Depression", P.I. Kenneth B. Wells, M.D., The Rand Corporation, Santa Monica, CA 90406 \$158,218

This study is examining the effects of Medicare's prospective payment system (PPS) and TEPPA payment system, relative to Medicare's former fee-for-service reimbursement, on elderly patients hospitalized with a primary diagnosis of unipolar depressive disorder and with active symptoms of depression at time of admission. Using time-series data drawn from medical records of a representative sample of 2,832 depressed elderly patients seen in 300 acute care general medical hospitals, Dr. Wells and colleagues are examining the effects of the three Medicare payment systems on case mix, length of stay, quality of care, and clinical status at discharge. The data base also includes information from secondary data bases, merged at the patient level, on post-hospitalization readmission and mortality rates.

K05 MH00832 "Payment Systems for Mental Health Care", P.I. Thomas G. McGuire, Ph.D., Department of Economics, Boston University, Boston, MA 02215 \$60,458

The purpose of this five-year Research Scientist Award is to provide research support that will permit Dr. McGuire, a mental health economist, to make further contributions to the policy analysis of mental health payment systems. In the area of conceptual research, he plans to develop a model of the determinants of health care use when both demand and supply-side cost-sharing are employed in payment systems. The empirical research component will focus on the patterns of mental health care for Medicare beneficiaries. The overall goal of Dr. McGuire's research is to expand the knowledge base for designing practical forms of mental health payment systems that are fair, that promote cost-effective care, and that give adequate consideration to the special characteristics of the mental health sector.

T32 MH 16242 "Mental Health Services and Systems Research Training", P.I. David Mechanic, Ph.D., The Institute for Health, Health Care Policy and Aging Research, Rutgers University, New Brunswick, NJ 08903 \$243,740

This is a postdoctoral training program in two substantive areas: (1) help-seeking processes and psychiatric disorder, and (2) mental health services and systems research. Among the research studies in this program is one that is assessing how elderly caregivers manage the care of mentally ill persons. The program involves faculty and students from Rutgers and Princeton Universities in seven disciplines: sociology, social work, psychology, law, economics, history, and geography. Collaborative training and field work relationships are also available with the Medical College of New Jersey, the Robert Wood Johnson Foundation, and the New Jersey State Department of Human Services. Typically, trainees remain in the program for a period of two years. The common training experience revolves around two weekly research seminars conducted by program faculty, Fellows, and guest speakers.

P50 MH48197 "Center for Rural Mental Health Care", P.I. Richard G. Smith, M.D., Department of Psychiatry and Behavioral Sciences, University of Arkansas, Little Rock, AR 72205 \$602,585

This center provides an interdisciplinary environment in which researchers are addressing major policy and service issues related to provision of rural mental health care. The ultimate goal of the Center is to use research as a means of improving clinical mental health care for rural populations by addressing issues of access, utilization, effectiveness, and outcome. Using the rural diversity present in the State of Arkansas as a natural laboratory, the Center is emphasizing three areas of research: (1) assessment of rural child and adolescent mental health, (2) development of a rural schizophrenia registry from information contained in Veterans Administration, Medicaid, and state mental hospital files, and (3) mental health care for rural elderly with cognitive impairment.

RO1 MH42902 "Effect of PPS on Access to Care for Medicare Psychiatric Patients", P.I. Dale Schumacher, M.D., Commission on Professional and Hospital Activities, Ann Arbor, MI 40106 \$106,815

Psychiatric care provided in short-term psychiatric hospitals is subject to Medicare's prospective payment system (PPS). While it is possible for hospitals to become more efficient under PPS without lowering the quality of care, it is also possible for hospitals to increase revenues in ways that subvert PPS cost containment goals or compromise the care provided. The purpose of this research is to assess the effect of PPS on hospitals, with particular reference to: (1) patient "skimming" or treating psychiatric and substance abuse cases in the more profitable DRGs; (2) patient "dumping" or transferring out or not admitting cases which are unprofitable; and (3) changes in readmission rates that would tend to favor the more profitable cases.

RO1-MH47054 "A Risk Analysis of Payment Options for Psychiatric Care", P.I. William D. White, Ph.D., Institute of Government and Public Affairs, University of Illinois, Chicago, IL 60607 \$162,816

Psychiatric hospitals and qualified psychiatric specialty units in general hospitals are currently exempt from the Medicare Prospective Payment System (PPS) System for inpatient services because of inadequacies in the current Diagnosis Related Group (DRG) methodology in PPS. The goal of Dr. White's research is to examine potential financial risk implications of alternative outlier payment policies for exempt psychiatric providers, including optional reinsurance. Payment options are being evaluated by using a 1985 hospital data set previously compiled for MMH in order to assist applications of advanced statistical methodologies to development of improved prospective payment systems for psychiatric care.

RO1 MH46889 "Baseline Psychiatric Hospital Profits", P.I. Howard P. Tuckman, Ph.D., Memphis State University, Memphis, TN 38152 \$30,485

Private psychiatric hospitals are among the hospital facilities excluded from the current Medicare Prospective Payment System (PPS). The goal of Dr. Tuckman's research is to enhance understanding of the financial position of investor-owned and nonprofit private psychiatric hospitals in order to establish a base line from which policy makers can evaluate the effects of alternative methods of paying for mental health care in these facilities. The study makes use of a pooled time-series/cross-section data base constructed from Medicare Cost Reports for the period 1982-1987.

T32 MH14623-13A1 "Research Training in Social Work and Mental Health", P.I. Edward J. Mullen, D.S.W., School of Social Work, Columbia University, New York, NY \$67,461

This services research training program is providing support for three pre-doctoral social work researchers to assist them in developing their skills for careers in mental health services research. The program focuses on three mental health services research areas: 1. the assessment process; 2. special populations, including the elderly, and 3. social work/social policy analysis in mental health services research. The program provides for internships at major mental health services research programs in New York City area, and includes doctoral program operations research and cost-benefit analysis. Faculty themselves are conducting research in case management, homelessness, AIDS and cost-benefit analysis.



DEPARTMENT OF HEALTH & HUMAN SERVICES

Public Health Service

Memorandum

Date November 16, 1990

From Marion E. Primes, Ph.D., ADGP, NIMH

Subject Annual Aging Report FY 1990 Grant Awards — Aging Related

To Director, Division of Applied and Services Research, NIMH

This memo is in response to Dr. Barry Lebowitz's request for a verification of the relevance of DASR grants to "Aging research".

Two grants, with (MC) codes, were identified as having an aging relevance. They include: 5-T34-MH-17138-08, George Stefano, Ph.D., ADAMHA MARC Program, and 1-R24-MH-47167-01, Judith Goggin, Ph.D., ADAMHA MIRDP.

Grant Descriptions:

5-T34-MH-17138-08
George Stefano, Ph.D.
ADAMHA MARC Honors Program
FY 1990 Funds: \$138,043

Dr. Stefano is the Program Director for the ADAMHA MARC Honors Program at the College at Old Westbury, State University of New York (SUNY). This is a research training program focused on minority group populations. Faculty conduct independent research projects and receive funding from such programs as the NIH-MERS Program. One of the major thrusts of neurosciences research at the College of Old Westbury is conducted by Dr. Leung dealing with the relationship of opioids in aging process. The researcher has demonstrated that short opicoid sequences can be maintained during evolution, and that this relationship is altered during the aging process of the animal.

1-R24-MH-47167-01
Judith Goggin, Ph.D.
ADAMHA MIRDP
FY 1990 Funds: \$90,750

Dr. Goggin is the Program Director for the new Minority Institutions Research Development Program (MIRDP). The MIRDP is new to ADAMHA. The program consists of two core components: (1) Institutional development (research infrastructure building), and (2) Individual Investigator research. Dr. Hoch is supported through this program; he initiated three individual studies. One study focused on the examination of factors that influence adherence to medical treatment regimens. Three studies will be undertaken. The first study involves the collection of data from closed case files of a community mental health center to distinguish between those patients who have presented compliance problems and those who have not. The second study will use intervention in an attempt to gain greater adherence; and the third study will use a community survey to begin to explore coping resources and styles for Anglos and Mexican-Americans when they are confronted with stress.

RO1 MH40032 "Chronic Patients: Rehabilitation Effect on Life Course", P.I. Michael J. Desisto, Ph.D., Maine/Vermont Research Project, Augusta Maine \$200,483

This research seeks to establish more precisely the meaning of results from a study that followed-up a cohort of former patients of the Vermont state hospital 30 years after their release from the hospital and found that the clinical status and social functioning of the former patients were far better than expected. The Vermont patients, who went through a special rehabilitation program in the hospital, are being compared to a matched cohort of persons discharged contemporaneously from a Maine state hospital that lacked such a rehabilitation program. Data on the two cohorts are being analyzed to compare long-term client outcomes and to determine how policy, program, fiscal, and legal changes in the two states over the 30-year period correlated with changes in client status and long-term course of illness.

BASIC RESEARCH RELATED TO AGING

PROJECT ABSTRACTS

SUMMARY STATEMENT
(Privileged Communication)

APPLICATION NO: 1 R01 MH45207-01
 DUAL: AG
 REVIEW GROUP: LCR 2 GROUP: AGING SUBCOMMITTEE
 MEETING DATE: FEB./MARCH 89 PRG CL CD: BR-C DUAL PRG CL CD:
 INVESTIGATOR: MCEVOY, CATHY L DEGREE: PHD
 ORGANIZATION: UNIVERSITY OF SOUTH FLORIDA RFA:
 CITY, STATE: TAMPA FL REQ. START DATE: 04/01/89
 PROJECT TITLE: PRIOR KNOWLEDGE EFFECTS IN COGNITIVE AGING
 RECOMMENDATION: APPROVAL PRIORITY SCORE: 122
 PERCENTILE SCORE: 22.6
 SPECIAL NOTE: 30-HS INV.-CERTIFIED NO IRG CONCERNS OR COMMENTS
 10-NO LIVE VERTEBRATE ANIMALS INVOLVED

PROJECT YEAR	DIRECT COSTS REQUESTED	DIRECT COSTS RECOMMENDED
01	62,318	62,318
02	56,212	56,212
03	57,807	57,807
04	60,527	60,527
05	63,378	63,378

APPLICANT'S ABSTRACT:

The recall of newly learned information declines with increasing age across the adult years. The magnitude of the age effect is influenced by the criterion task used to test recall, such that greater age effects are found in free and cued recall, as compared to recognition. Age effects are also more apparent when the test instructions require the subject to explicitly recall the studied information, rather than using implicit tests to prompt that recall. When the to-be-learned information is presented as explicit facts, requiring little inferential processing on the part of the subject, age effects are less apparent. And finally, the use of semantic relationships between newly learned items of information appears to be more spontaneous and beneficial for younger than for older adults.

The proposed research will apply an existing model of human memory to the cognitive changes associated with aging. This model describes the effects of prior knowledge that the person brings to the learning situation, and the encoding and retrieval processes used in memory tasks. The model was developed using young adult subjects, and is now sufficiently detailed to apply to memory changes in older adults. The long-term goal of the project is to understand the ways in which older subjects use their prior knowledge to encode and retrieve information. Emphasis will be placed on processes such as the use of prior semantic connections in encoding new information, retrieval inhibition from searching existing knowledge, and accessing concepts across domains of information (i.e., accessing the phonemic code for a word when its semantic code has been retrieved).

The initial work on this project will be directed toward understanding cognitive changes in normal healthy elderly subjects. However, this project is also designed to investigate cognitive changes in elderly subjects with intellectual impairment from early dementia and clinical depression. The results of this research will allow us to understand the differences and the commonalities between normal and abnormal cognitive aging, and will have implications for developing techniques for teaching impaired elders.

FINAL ACTION: May 22-23, 1989

APPLICATION NO: 2 R01 MH16360-20
 DUAL:
 REVIEW GROUP: SRCH/NIH GROUP: SPECIAL REVIEW COMMITTEE - BBP
 MEETING DATE: JUN 88 PRG CL CD: BR-C DUAL PRG CL CD:
 INVESTIGATOR: NELSON, DOUGLAS L DEGREE: PHD
 ORGANIZATION: UNIVERSITY OF SOUTH FLORIDA RFA:
 CITY, STATE: TAMPA FLORIDA REQ. START DATE: 12/01/88
 PROJECT TITLE: WORDS & PICTURES: CODING SENSORY AND MEANING FEATURES
 RECOMMENDATION: APPROVAL PRIORITY SCORE: 158
 PERCENTILE SCORE: 43.9
 SPECIAL NOTE: 32-HS INV.-CERTIFIED, IRG COMMENTS
 10-NO LIVE VERTEBRATE ANIMALS INVOLVED

PROJECT YEAR	DIRECT COSTS REQUESTED	DIRECT COSTS RECOMMENDED
20	54,675	54,675
21	55,108	55,108
22	57,663	57,663
23	62,746	62,746
24	63,563	63,563

APPLICANT'S ABSTRACT:

Experiencing a familiar concept implicitly activates related concepts. This activation provides rapid access to prior knowledge that is critical to many fundamental psychological processes. However, as the project has shown, such activation also affects memory for direct experience. The goal of this research is to understand how implicitly activated concepts affect the encoding and retrieval of direct experience, and to develop a theoretical model that explains this influence. The working model assumes that the encoding of related concepts incorporates them into the learning or testing episode, and that such incorporation can either facilitate or hinder depending on the tasks that must be performed. The model specifies when related concepts are likely to be encoded and how they affect performance.

The methodology requires subjects to encode familiar concepts under various learning conditions and to retrieve these concepts under various testing conditions. Variations in learning conditions include manipulations of context, encoding orientation, timing and interference; variations in testing conditions include manipulations of type of retention test, the nature of the retrieval cues and location of testing. All experiments involve manipulations of the number of related concepts activated by directly experienced concepts. In general, concepts that activate larger networks of related concepts are not as likely to be remembered, nor are they as likely to be effective as retrieval cues. These findings hold for both phonemically and meaningfully related concepts. Implicitly activated concepts can interfere with memory for what was actually experienced. However, there are exceptions to these general patterns, even reversals of effect, and they help explain how unconsciously activated concepts affect memory.

Findings will be relevant to understanding memory in normals, and will have direct implications for research in perception, speech, reading, language comprehension, and for practitioners in mental health who rely on cues to help clients retrieve information.

FINAL ACTION: September 12-14, 1988

(Continued)

SUMMARY STATEMENT
(Privileged Communication)

Assessment Number: 1 R01 BR41784-U1
 Date Received: RD
 BDP
 Assessor Group: BASIC BEHAV PROCESSES RES REV CORR
 Issuing Date: FEB/MARCH 1986
 Investigator: MC CLINTOCK, MARTHA E
 Position: ASSOCIATE PROFESSOR
 Organization: UNIVERSITY OF CHICAGO
 City, State: CHICAGO, ILL
 Project Title: PHEROMONES, BEHAVIOR AND THE REGULATION OF FERTILITY
 Recommendation: APPROVAL
 Priority Score: 115
 10-NO HUMAN SUBJECTS INVOLVED.
 30-ANIMALS INV.-VERIFIED, NO IEG CONCERNS OR COMMENT
 GRANT PERIOD

PROJECT	ORIGINAL REQUEST	RECOMMENDED
01	95,921	95,921
02	93,066	93,066
03	99,882	99,882
04	103,822	103,822

APPLICANT'S ABSTRACT

The timing of female fertility can be altered by social signals from females in a social group. In rats, ovulation can be accelerated by odors from pregnant or proovulatory females and delayed by odors from lactating or ovulatory females. These odors are pheromones and may result in the synchronization or suppression of estrus within the social group. Two different strategies for achieving successful reproduction under different conditions and examples of the behavioral regulation of fertility. In this grant period, we propose to:

- (1) Identify the hormonal response to odors produced during the birth cycle (pregnancy, birth, and lactation) and the estrous cycle, using a modified jugular cannulation technique. Our technique is novel, because it permits repeated sampling of several steroids and gonadotropins from intact female rats. Because this type of data has not been available previously, even our baseline data will be unique and useful. Once we have established the normal relationship of these hormones, we will be able to assess the effect of birth and estrous cycle pheromones on that relationship and distinguish among several hypothesized mechanisms for controlling the time of ovulation.
- (2) Determine the endocrine basis for individual differences in fertility that may affect differential reproductive success, including individual differences in vulnerability to birth cycle pheromones, reproductive behavior, and length of the reproductive lifespan.
- (3) Finally, we will determine whether birth cycle pheromones mediate the social suppression of postpartum fertility, a phenomenon that may have particular significance for the evolution of pheromonal regulation of female fertility.

FINAL ACTION: May 19-21, 1986

APPLICATION NO: 1 R01 MH43948-01A1
 DUAL:
 REVIEW GROUP: BSR GROUP: MH BEHAV SC RES REV COMM
 MEETING DATE: JUN 16-18, 1988 PRG CL CD: BR-P DUAL PRG CL CD:
 INVESTIGATOR: NELSON, RAVENNA M DEGREE: PHD
 ORGANIZATION: UNIVERSITY OF CALIFORNIA RFA:
 CITY, STATE: BERKELEY CA REQ. START DATE: 12/01/88
 PROJECT TITLE: LONG/TERM INFLUENCES ON MH OF WOMEN IN THEIR 50s
 COMMENDATION: APPROVAL PRIORITY SCORE: 125
 SPECIAL NOTE: 30-HS INV.-CERTIFIED NO IRG CONCERNS OR COMMENTS
 10-NO LIVE VERTEBRATE ANIMALS INVOLVED
 PRIORITY SCORE: 16.0

PROJECT YEAR	DIRECT COSTS REQUESTED	DIRECT COSTS RECOMMENDED
01A1	72,121	77,121
02	75,724	80,724
03	79,233	84,233

APPLICANT'S ABSTRACT:

The proposed research will extend to 30 years the temporal span of one of the very few longitudinal studies of women's personality development in adulthood. The original sample consisted of 141 seniors who graduated from a well-known women's college in 1958 and 1960, shortly before the Women's Movement. The women have been intensively studied by the principal investigator at ages 21, 27, and 43; the proposed research would follow them into the early 50s. Data to be obtained will include widely-ranging personality inventories and questionnaires about work, relationships, and other aspects of life. Some inventory and questionnaire data will also be obtained from partners. These new data will be combined with archival data that include personality inventories, questionnaires, and demographic information from the women, and, at age 27, from their partners as well. For a substantial subgroup at age 21, there are observer descriptions, interviews, and information from and about parents.

The conceptual objective is to study how the personalities of women affect their entry into age-graded roles and transitions and are modified by these roles and transitions in the changing environments of work, family, and intimate relationships. Emphasis will be placed on the psychological health of women in the context of various roles and role-sequences, and on the ability of women to make commitments and to modify or change them over time.

Using ANOVA, hierarchical multiple regression, and *t* tests, the new data will be integrated with archival data to respond to two kinds of questions:

(1) For the sample as a whole and for groups of special interest (such as women who were judged high on pathology in college or those who divorced when their children were young), what are the linkages over time between personality, social roles, and life outcomes at age 51? How do long-term role variables, such as amount and type of work or traditionality of roles, influence women's well being and effectiveness of functioning?

(2) For most women in the sample, the period from ages 43-51 will have included the menopause, signs of aging, and the departure of children from the home. How do role-involvements, gender-related personality characteristics, and quality of relationships change over this period? Is lack of change associated with psychological dysfunction? Can changes be conceptualized, both for women with children and for other women, in terms of revision of "social clock projects"? Old and new data from partners, combined with data from the longitudinal sample, will bear on these questions.

SUMMARY STATEMENT
(Privileged Communication)

APPLICATION NO: 2 R01 MH37134-07A1
 REVIEW GROUP: BPN 2 GROUP: 9E DUAL:
 BEHAVIORAL NEUROBIOLOGY SUBCOMMITTEE
 MEETING DATE: FEB./MARCH 89 PRG CL CD: NR-N DUAL PRG CL CD:
 INVESTIGATOR: BAILEY, CRAIG W DEGREE: PHD
 ORGANIZATION: NEW YORK STATE PSYCHIATRIC INSTITUTE RFA:
 CITY, STATE: NEW YORK, NEW YORK REQ. START DATE: 07/01/89
 PROJECT TITLE: MORPHOLOGICAL BASIS OF SYNAPTIC PLASTICITY
 RECOMMENDATION: APPROVAL PRIORITY SCORE: 115
 PERCENTILE SCORE: 14.7
 SPECIAL NOTE: 10-NO HUMAN SUBJECTS INVOLVED
 10-NO LIVE VERTEBRATE ANIMALS INVOLVED

PROJECT YEAR	DIRECT COSTS REQUESTED	DIRECT COSTS RECOMMENDED
07A1	135,307	120,338
08	142,312	124,592
09	149,678	133,173
10	157,428	140,099
11	165,581	147,385

APPLICANT'S ABSTRACT:

How information is stored within the brain is an issue central to the study of behavior. Of particular importance is the functional relationship between synaptic structure and the changes in synaptic effectiveness that accompany learning and memory. To address this problem we propose to examine the nature, extent and time course of the morphological events at identified synapses that accompany elementary forms of learning and memory and explore the role such structural alterations may play in initiating and maintaining the changes in synaptic function that underlie these behavioral modifications. Toward this end we plan to use a model system, the gill-withdrawal reflex of the marine mollusc *Aplysia californica* in which several forms of learning and memory have been studied to advantage on both the cellular and molecular level. We have recently exploited this system to examine the morphological basis of short- and long-term habituation and sensitization. Using horseradish peroxidase (HRP) to label the presynaptic terminals of identified sensory neurons (a critical site of plasticity for both forms of learning) and complete serial reconstruction to analyze the total number and fine structure of synaptic contacts, we have found that long-term memory is accompanied by structural alterations on two levels of synaptic organization: 1) changes in the number, size, and vesicle complement of focal regions of membrane specialization (active zones) of the synapse, and 2) a parallel but more dramatic and global trend involving modulation of the total number of synaptic varicosities. In contrast, the morphological correlates of short-term memory in *Aplysia* are restricted to shifts in vesicle populations associated with sensory neuron active zones. These findings provide the first direct evidence that behavioral modification produces structural changes at the level of identified synapses critically involved in learning and suggest a clear difference in the morphological events that accompany memories of differing durations. To explore these issues in more detail, we now plan to examine the time course and underlying biochemical events responsible for the morphological changes at sensory neuron synapses that accompany both short- and long-term memory. A temporal analysis should allow us to determine which classes of structural change are necessary for the acquisition and maintenance of memory and an analysis of mechanism will aid in establishing a more causal relationship between synaptic architecture and the learning process. The approaches we have developed and the model system we plan to use provide the required specificity to address these problems directly and should increase our understanding of how the functional architecture of the synapse is related to its plastic capabilities.

FINAL ACTION: May 22-23, 1989

SUMMARY STATEMENT
(Privileged Communication)

APPLICATION NO: 2 K02 MH00343-06A1
 REVIEW GROUP: MHK GROUP: DUAL:
 RES SCIENTIST DEV REVIEW COMM
 MEETING DATE: October 28-29, 1987 PRG CL CD: NR DUAL PRG CL CD:
 INVESTIGATOR: BERGER, THEODORE W DEGREE: PHD
 PROFESSOR OF BEHAVIORAL NEUROSCIENCE
 ORGANIZATION: UNIVERSITY OF PITTSBURGH RFA:
 CITY, STATE: PITTSBURGH PENNSYLVANIA REQ. START DATE: 04/01/88
 PROJECT TITLE: LIMBIC CORTICAL BASES OF ASSOCIATIVE LEARNING
 RECOMMENDATION: APPROVAL (UNANIMOUS) PRIORITY SCORE: 108
 SPECIAL NOTE: 10-NO HUMAN SUBJECTS INVOLVED
 30-ANIMALS INV.-NO IRG COMMENTS OR CONCERNS NOTED

PROJECT YEAR	DIRECT COSTS REQUESTED	DIRECT COSTS RECOMMENDED
06A1	\$0,600	\$0,600
07	\$0,600	\$0,600
08	\$0,600	\$0,600
09	\$0,600	\$0,600
10	\$0,600	\$0,600

APPLICANT'S ABSTRACT:

This application is in request of a ADAMHA Research Scientist Development Award. The research supported by this Award will focus on neural plasticity that develops in the hippocampus as a result of behavioral learning, using classical conditioning of the eyeblink in rabbit as a model system. Three specific issues with respect to this eyeblink will be investigated. First, we will determine the multi-synaptic anatomical pathways through which learning-induced changes in the activity of hippocampal pyramidal neurons affects the cerebellum—a brain structure known to be involved in the formation of the conditioned eyeblink response. Second, we will use nonlinear systems analytic techniques to characterize functional properties of the hippocampus expressed only at the network level, i.e., properties emerging from the coordinated activity of all its subpopulations of neurons acting as a system. We then will investigate how these system properties are altered during eyeblink conditioning. Finally, we will investigate the contribution of brainstem noradrenergic and serotonergic inputs to changes in pyramidal cell activity that develop during classical conditioning.

FINAL ACTION: February 8-10, 1988

SUMMARY STATEMENT
(Privileged Communication)

APPLICATION NO: 2 R01 MH31842-11
 REVIEW GROUP: BPM 2 GROUP: DUAL:
 BEHAVIORAL NEUROBIOLOGY SUBCOMMITTEE
 MEETING DATE: FEB./MARCH 88 PRG CL CD: NR6 DUAL PRG CL CD:
 INVESTIGATOR: BIRD, EDWARD D DEGREE: MD
 ORGANIZATION: MC LEAN HOSPITAL (BELMONT, MA) RFA:
 CITY, STATE: BELMONT MASSACHUSETTS REG. START DATE: 08/01/85
 PROJECT TITLE: BRAIN TISSUE RESOURCE FOR NEUROPSYCHIATRIC RESEARCH
 RECOMMENDATION: APPROVAL PRIORITY SCORE: 117
 SPECIAL NOTE: 30-HS INV.-CERTIFIED NO IRG CONCERNS OR COMMENTS
 10-NO LIVE VERTEBRATE ANIMALS INVOLVED
 SITE VISIT

PROJECT YEAR	DIRECT COSTS REQUESTED	DIRECT COSTS RECOMMENDED
11	475,961	380,501
12	437,895	355,496
13	585,533	388,396
14	417,453	407,008
15	668,972	444,673

APPLICANT'S ABSTRACT:

The Brain Tissue Resource Center (BTRC) was established in 1978 to promote neurochemical research in two disorders - Huntington's disease (HD) and schizophrenia. At that time, lay organizations alerted their members in order to promote brain donations. Over 500 HD brain donations have been made by families having this autosomal dominant disorder. Only in the last year have a substantial number of brain donations been made by the next of kin of persons dying with schizophrenia. This recent increase is largely due to the formation of a national organization called the Alliance for the Mentally Ill (AMI) which is committed to promoting basic research into mental illness.

The BTRC has more recently been collecting brain tissue from other neuropsychiatric disorders. A neuropathological examination is carried out on one half of every brain in order to confirm a diagnosis or rule out any pathology in a normal control brain. The remaining half is frozen and then dissected into as many as 60 regions which are then stored and later distributed to neuroscientist requesting tissue. Brain tissues have been collected from over 49 states and 6 countries and then dissected and distributed to 200 neuroscientists in 30 states and 5 countries.

The BTRC also conducts research in order to improve methods in the collection and dissection of brain tissue. Over the BTRC's nine-year period, there have been over 100 publications written by the BTRC staff and the investigators utilizing the brain tissue for their studies. These published findings cover 15 different neuropsychiatric disorders as well as such new basic data found in the "normal" human brain. These discoveries have opened a new frontier into the study of a number of human disorders of the brain.

The BTRC has been supported by NIMH, NINCDS, the Hereditary Disease Foundation, The Wills Foundation, the Huntington's Disease Foundation, and the Scottish Rite Foundation's Schizophrenia Research Program.

FINAL ACTION: May 16-18, 1988

APPLICATION NO: 2 R01 MH40698-04
 REVIEW GROUP: SPN 2 GROUP: DUAL
 BEHAVIORAL NEUROBIOLOGY SUBCOMMITTEE
 MEETING DATE: FEB./MARCH 88 PRG CL CD: NR.6 DUAL PRG CL CD:
 INVESTIGATOR: BRAUTH, STEVEN E DEGREE: PHD
 ORGANIZATION: UNIVERSITY OF MARYLAND COLLEGE PK CAMPUS RFA:
 CITY, STATE: COLLEGE PARK MARYLAND REQ. START DATE: 07/01/88
 PROJECT TITLE: NEURAL BASIS OF ASSOCIATIVE LEARNING
 RECOMMENDATION: APPROVAL PRIORITY SCORE: 116
 SPECIAL NOTE: 10-NO HUMAN SUBJECTS INVOLVED
 30-ANIMALS INV.-NO IRG COMMENTS OR CONCERNS NOTED

PROJECT YEAR	DIRECT COSTS REQUESTED	DIRECT COSTS RECOMMENDED
04	62,140	62,140
05	68,354	68,354
06	75,190	75,190
07	82,708	82,708

APPLICANT'S ABSTRACT:

This research program aims to examine the neuroanatomical foundations of vocal learning in budgerigars as a model for studying the neural basis of interactions between innate, constitutional factors and experiential learning during postnatal development. Previous results have shown that vocal learning depends upon both innate factors and experiential learning in this species since the acquisition of a normal vocal repertoire requires exposure to an appropriate external model during postnatal development. Neuroanatomical experiments are proposed to further study the pathways by which sensory feedback can influence vocal motor centers as well as the pathways by which vocal motor centers can cue the sensory systems. Behavioral experiments using multidimensional scaling and assessment of vocal plasticity will pinpoint the role of these anatomical pathways in guiding and shaping learned vocal responses by evaluating the effects of lesions in these pathways at different points during postnatal development.

FINAL ACTION: May 16-18, 1988

Application Number: 1 R01 MH40698-04
 REVIEW GROUP: SPN 2 GROUP: DUAL
 BEHAVIORAL NEUROBIOLOGY SUBCOMMITTEE
 MEETING DATE: FEB 1988
 INVESTIGATOR: CAREW, THOMAS J DEGREE: PHD
 ORGANIZATION: YALE UNIVERSITY
 CITY, STATE: NEW HAVEN, CT REQ. START DATE: 12/01/85
 PROJECT TITLE: CELLULAR MECHANISMS OF OPERANT CONDITIONING IN APLEZIA
 RECOMMENDATION: APPROVAL PRIORITY SCORE: 128
 SPECIAL NOTE: OUTSIDE OPINION
 10-NO HUMAN SUBJECTS INVOLVED.
 30-ANIMALS INV.-NO IRG COMMENTS OR CONCERNS NOTED.

PROJECT YEAR	DIRECT COSTS REQUESTED	DIRECT COSTS RECOMMENDED
01	85,398	88,698
02	94,575	89,522
03	101,646	96,236
04	109,293	

APPLICANT'S ABSTRACT:

The marine mollusc *Aplysia* has been proven to be an extremely useful preparation for studying the cellular and molecular mechanisms of classical conditioning. We have recently discovered that *Aplysia* is also capable of exhibiting a reliable form of operant conditioning: the animal rapidly learns to maintain a specific postural response in order to terminate the presentation of an aversive reinforcer (a bright light). Moreover, some of the elements in the neural circuit for the operant response are already known. Thus, it is the long term goal of this research program to analyze the cellular mechanisms of operant conditioning in *Aplysia*.

There are two specific aims of the project: (1) a BEHAVIORAL ANALYSIS will be aimed at characterizing the detailed behavioral properties of the operant conditioning, including its basic and higher-order features; (2) a CELLULAR ANALYSIS will be aimed at specifying the neuronal mechanisms underlying the conditioning at progressively more fundamental levels, beginning with neural correlates in intact animals and progressing to directly producing the operant conditioning in both *in vitro* and analog systems, which permit detailed cellular investigation.

Gaining insights into the cellular mechanisms of operant conditioning would be of significance from three perspectives: from a basic scientific perspective there is currently a real gap in our understanding of neuronal mechanisms of operant conditioning, even though it constitutes a significant form of associative learning; (2) from a theoretical perspective there has been a long-standing question in Psychology whether classical and operant conditioning represent two fundamentally different forms of learning. Since *Aplysia* now shows both forms of learning, a cellular analysis comparing their mechanisms could provide key insights into this major theoretical question; and (3) from an applied perspective insights into cellular mechanisms of operant conditioning could potentially be of important clinical relevance. Since operant conditioning is routinely used in behavioral assessment of a wide variety of clinically relevant drugs, *Aplysia* could provide a powerful model system in which to explore the cellular actions of these drugs in mechanistic terms.

FINAL ACTION: SEPTEMBER 9-11, 1985

(continued)

SUMMARY STATEMENT
(Privileged Communication)

APPLICATION NO: 2 R01 MH40860-05
 REVIEW GROUP: ~~SP~~ N GROUP: DUAL:
 SPECIAL REVIEW COMMITTEE - NIMH
 MEETING DATE: OCT./NOV. 89 PRG CL CD: NR DUAL PRG CL CD:
 INVESTIGATOR: CROW, TERRY J DEGREE: PHD
 ORGANIZATION: UNIVERSITY OF TEXAS HEALTH SCIENCE CTR RFA: NR
 CITY, STATE: HOUSTON, TEXAS REQ. START DATE: 04/01/90
 PROJECT TITLE: PHARMACOLOGY AND NEURAL CIRCUIT UNDERLYING BEHAVIOR
 RECOMMENDATION: APPROVAL PRIORITY SCORE: 123
 PERCENTILE SCORE: 18.1
 SPECIAL NOTE: 10-NO HUMAN SUBJECTS INVOLVED
 10-NO LIVE VERTEBRATE ANIMALS INVOLVED

PROJECT YEAR	DIRECT COSTS REQUESTED	DIRECT COSTS RECOMMENDED
85	117,987	117,987
86	125,066	125,066
87	132,568	132,568
88	140,521	140,521
89	148,950	148,950

RESUME: This application requests \$665,092 in direct costs over a five-year period in continued support to investigate the cellular and molecular mechanisms underlying both short and long-term memory produced by a specific form of associative learning in the marine mollusc *Hermissenda*. The primary aim of the proposal is to determine the role of a particular second messenger system, protein kinase C (PKC), in the induction and expression of short-term and long-term memory changes produced by a one trial associative conditioning analogue. The proposed research will involve studies of short-term memory, long-term memory and behavior. The committee noted that the present proposal represents a thoughtful and thorough set of experiments designed to address a fundamental question in Neurobiology: the cellular and molecular basis of learning and memory. The PI is highly qualified to carry out the work, having an international reputation as a major contributor to this field. Approval was recommended.

DESCRIPTION (Adapted from Applicant's Abstract): The long-term objective of this research project is to analyze the cellular and molecular mechanisms of an example of associative learning and memory. The studies proposed in this grant should provide insights into general principles underlying memory for an associative experience and help to determine the events that are critical for the transformation of short-term memory into a more enduring form (long-term memory). Toward these goals, a multidisciplinary approach to the study of associative learning and memory will be carried out in the marine mollusc

FORM 101-1 (REVISED 6-8-86) (4-86)

SUMMARY STATEMENT
(Privileged Communication)

Assessment Number: 1 R01 MH41834-01A1
 Date Review:
 BPN -2
 Reviewer: BEHAVIORAL NEUROBIOLOGY SUBCOMMITTEE NR-B
 Review Date: OCT./NOV. 1986
 Investigator: FIPKOVA, EVA Degree: PHD
 Institution: UNIVERSITY OF COLORADO
 City, State: BOULDER, COLORADO Requested Start Date: 04/01/87
 Project Title: MOLECULAR MECHANISM OF LONG-TERM SYNAPTIC CHANGES
 Recommendation: APPROVAL Priority Score: 192
 10-NO HUMAN SUBJECTS INVOLVED.
 30-ANALS INV.-VERIFIED, NO IRG CONCERNS OR COMMENT

Project Number	Original Budget	Revised Budget	Current Budget
01A1	76,587	76,587	76,587
02	82,747	82,747	82,747
03	91,020	91,020	91,020

APPLICANT'S ABSTRACT:

The principal goal of my research is to elucidate the molecular mechanism of the long term increase in synaptic efficacy in the dentate fascia. My previous work has indicated that morphometric changes in the postsynaptic spine may modulate activity of that particular synapse. In search for the mechanism of stimulation-induced long-term modifications in dendritic spines, we have assumed in analogy with non-neural tissues that this change could be related to actin, its regulatory proteins and free cytoplasmic Ca^{2+} . Actin conformation may be changed within fractions of a second after stimulation and the duration of such a change may be determined by the conditions of the intracellular environment. For technical reasons it would be difficult to study directly the stimulation-related changes in the organization of the actin network. Therefore, we propose to study brain spectrin (fodrin) which is an actin-associated protein, intimately involved in the organization of actin filaments and is capable of reorganization in response to stimulation. Given the lack of information on the organization and localization of brain spectrin that is essential for understanding its function, we propose a series of immunoelectron microscope studies of brain spectrin in adult rats, during development and during long-term potentiation (LTP). Since LTP is currently the best physiological model of synaptic plasticity and has all the characteristics that would be expected of an associative memory device, it is essential to understand its mechanism. Higher order sensory information converge to the entorhinal cortex and proceed to the dentate fascia. Conditioning stimuli which increase the dentate granule cell activity do not change the activity of the entorhinal cortex which points to the importance of the entorhinal-dentate synapse on dendritic spines. Senescent rats that suffer from a loss of dendritic spines in the dentate fascia were shown to be deficient in both LTP and spatial memory. Thus, dendritic spines may be implicated not only in the mechanism of LTP, but also in the mechanism of memory. Therefore, clarification of the molecular mechanism of morphometric changes in spines may provide a valuable tool in studies leading to the understanding of higher brain functions.

FINAL ACTION: FEBRUARY 9 - 11, 1987

SUMMARY STATEMENT
(Privileged Communication)

APPLICATION NO: 2 R01 MH39180-04A2
 REVIEW GROUP: BPN 2 GROUP: DUAL:
 BEHAVIORAL NEUROBIOLOGY SUBCOMMITTEE
 MEETING DATE: FEB./MARCH 88 PRG CL CD: NR/P DUAL PRG CL CD:
 INVESTIGATOR: GALLAGHER, MICHELA DEGREE: PHD
 ORGANIZATION: UNIVERSITY OF NORTH CAROLINA CHAPEL HILL RFA:
 CITY, STATE: CHAPEL HILL NORTH CAROLINA REQ. START DATE: 07/01/88
 PROJECT TITLE: NEUROCHEMICAL REGULATION OF MEMORY IN THE AGED
 RECOMMENDATION: APPROVAL PRIORITY SCORE: 115
 SPECIAL NOTE: 10-NO HUMAN SUBJECTS INVOLVED
 30-ANIMALS INV.-NO IRG COMMENTS OR CONCERNS NOTED

PROJECT YEAR	DIRECT COSTS REQUESTED	DIRECT COSTS RECOMMENDED
04A2	68,016	~~68,783~~ 49,250
05	71,342	~~63,823~~ 52,531
06	74,835	~~67,018~~ 56,026

APPLICANT'S ABSTRACT

A functional decline in the basal forebrain cholinergic (ACh) system may underlie the mild/moderate changes in cognitive and memory capacity associated with normal aging. One aim of the proposed research is to assess the effects of normal aging in laboratory rodents on the basal forebrain ACh system, with special reference to the function of septo-hippocampal ACh neurons.

Our prior work, as well as the results of other studies, suggests that the complement of basal forebrain ACh neurons is largely intact in the aged rodent brain as indicated by cell number, measurement of choline acetyltransferase (ChAT) and high-affinity choline uptake (HACU) in its basal area. This provides an interesting background for our recent observation that the dynamic response of hippocampal and cortical HACU to a behavioral manipulation is blunted in the aged brain. In order to further examine this phenomenon, training procedures that are acutely sensitive to ACh manipulation and hippocampal damage in young rats, and that also distinguish the behavioral impairments of aged rats, i.e. spatial learning, will be used. HACU and [³H]-hemicholinium-3 binding in synaptosomal preparations will be examined as markers for ACh neurons. Each of these measures manifests rapid regulation as manipulations of ACh neuronal activity in young animals. Subsequent experiments are designed to determine the neuroanatomical distribution of training-induced regulation of [³H]-hemicholinium binding using *in vivo* autoradiographic techniques.

Another goal of the project is assess the extent to which different behavioral/neurobiological markers of aging are intercorrelated. To this end, behavioral data will be obtained for young and aged rats on a series of behavioral tasks that are selected to assess different functions (learning and memory, motor competence, diurnal patterns of behavior etc.). Subsequently, analysis of a variety of targeted neurobiological markers in forebrain systems (limbic/cortical and striatum) will be assessed. The results should indicate 1) whether age-related changes in different behavioral functions occur somewhat independently, 2) whether distinctive neurobiological markers coincide with different indices of functional decline in the aged animal, and 3) importantly, in the context of our interest in cognitive/memory functions, whether a limited set of these neurobiological markers that change with age are specifically associated with a decline in spatial learning capacity in aged rats.

FINAL ACTION: May 16-18, 1988

SUMMARY STATEMENT
(Privileged Communication)

Application Number: 2 R01 MH35554-10A1
 DUAL: DA

Review Group: BPN -2
 BEHAVIORAL NEUROBIOLOGY SUBCOMMITTEE
 Meeting Dates: IRG: OCT/NOV 1989 NR-N
 COUNCIL: JAN/FEB 1990
 Investigator: GALLAGHER, MICHELA Degree: PHD
 Organization: UNIVERSITY OF NORTH CAROLINA CHAPEL HILL
 City, State: CHAPEL HILL, NORTH CAROLINA Requested Start Date: 04/01/90
 Project Title: AMYGDALA OPIOID PEPTIDES: ROLE IN LEARNING & MEMORY

Recommended: APPROVAL Percentile: 26.3
 Human Subjects: 10-NO HUMAN SUBJECTS INVOLVED Priority Score: 116
 Animal Subjects: 30-ANMLS INV.-VERIFIED, NO IRG CONCERNS OR COMMENT

PROJECT YEAR	DIRECT COSTS REQUESTED	DIRECT COSTS RECOMMENDED
10A1	99,198	87,498
11	95,765	83,480
12	100,477	87,578
13	133,007	
14	139,580	119,463
		0

RESUME: This is a resubmission of a competing renewal proposal requesting five years of additional support to investigate the role of the amygdala in learning and memory functions in rats. The conceptual framework for the proposed experiments challenges the prevailing view that the central nucleus (CN) of the amygdala is part of the neural substrate for conditioned fear, and proposes instead that the CN is an essential component of a neural system which underlies a class of conditioned response (CR) that is closely associated with orienting and alerting behavior.

Several series of experiments have been proposed to investigate the hypothesized role of the amygdala and the "extended amygdala" system using behavioral and neuropharmacological methods. The Committee thought that although this revision was more cohesive than the original proposal, it still was somewhat diffuse in terms of attempting to investigate too many different areas. The major strengths were the conceptual framework and the combination of the investigators' expertise in neurobiology and behavior. The weakness was the overly scattered nature of some of the studies. Thus, the Committee recommended three years of support to focus on the strengths of Part I of the proposal in order to provide an evaluation of the role of opioid peptides in the amygdala.

DESCRIPTION: (Adapted from Applicant's Abstract): Behavioral and neuropharmacological methods will be used to examine two notable features of

Date Released: 01/08/90

Date Printed: 01/11/90

SUMMARY STATEMENT
 (Privileged Communication)

APPLICATION NO: 2 R01 MH16841-21
 SRCM GROUP: 14 DUAL:
 REVIEW GROUP: SPECIAL REVIEW COMMITTEE - NIMH
 MEETING DATE: FEB./MARCH 88 PRG CL CD: NR DUAL PRG CL CD:
 INVESTIGATOR: HARVEY, JOHN A DEGREE: PHD
 ORGANIZATION: UNIVERSITY OF IOWA RFA:
 CITY, STATE: IOWA CITY, IOWA REQ. START DATE: 07/01/88
 PROJECT TITLE: EFFECT OF CNS LESIONS ON DRUG ACTION
 RECOMMENDATION: APPROVAL PRIORITY SCORE: 125
 SPECIAL NOTE: 10-NO HUMAN SUBJECTS INVOLVED
 30-ANIMALS INV.-NO IRG COMMENTS OR CONCERNS NOTED

PROJECT YEAR	DIRECT COSTS REQUESTED	DIRECT COSTS RECOMMENDED
21	171,789	149,344
22	185,532	161,291
23	200,374	174,194
24	216,403	188,130
25	233,715	203,180

APPLICANT'S ABSTRACT:

Pavlovian conditioning of the rabbit's nictitating membrane response, a corneal-Vlch nerve reflex, is generally agreed to provide a reliable measure of associative learning and memory. This model system will be used to identify the anatomical pathways and neurochemical systems involved in learning and memory and to examine the behavioral and neurochemical processes through which drugs act to alter learning and memory. Experiments will be carried out under three major aims that will provide converging approaches to obtain additional knowledge of these basic processes. Aim 1 will examine those brain regions that have been suggested to play an essential or important role in the acquisition and/or performance of conditioned responses. This will include a thorough examination of recent proposals that the cerebellum is essential for the learning of motor acts by the use of cortical (Vlch lobe) and subcortical (interpositus) lesions of the cerebellum and from reversible lesions produced by infusion of lidocaine. The reversible lesion will then be employed to establish whether interpositus is essential for the acquisition of conditioned responses. These reversible lesions will also be used to identify other pathways of the conditioned and unconditioned response. Aim 2 will examine the uptake of ^3H - and ^{14}C -2-deoxy-D-glucose in a double isotope technique employing quantitative autoradiography to identify the areas of brain that are differentially activated by the contiguous presentation of a conditioned and unconditioned stimulus and whether such heterosynaptic facilitation of neuronal activity can predict subsequent rates of learning. For example, the effect of some drugs on learning appear to be secondary to their ability to increase or decrease such heterosynaptic facilitation. Aim 3 will use intraventricular injections of drugs that activate or inhibit the cAMP system to examine the role of this second messenger in learning and in the effects of drugs on learning. Such knowledge should provide clues concerning the neural systems involved in human disorders of learning and memory (e.g., Alzheimer's disease) and identify the drugs that might be effective in their treatment.

SUMMARY STATEMENT
(Privileged Communication)

APPLICATION NO: 1 R01 MH45397-01
BPN 2 GROUP: 9E DUAL:
REVIEW GROUP: BEHAVIORAL NEUROBIOLOGY SUBCOMMITTEE
MEETING DATE: FEB./MARCH 89 PRG CL CD: NR-B DUAL PRG CL CD:
INVESTIGATOR: KLEIN, MARC DEGREE: PHD
ORGANIZATION: CLINICAL RES INST OF MONTREAL RFA:
CITY, STATE: MONTREAL, QUEBEC, CANADA REQ. START DATE: 07/01/89
PROJECT TITLE: CELLULAR MECHANISMS OF LEARNING IN APLYSIA
RECOMMENDATION: APPROVAL PRIORITY SCORE: 118
PERCENTILE SCORE: 21.8
SPECIAL NOTE: 10-NO HUMAN SUBJECTS INVOLVED
10-NO LIVE VERTEBRATE ANIMALS INVOLVED

PROJECT YEAR	DIRECT COSTS REQUESTED	DIRECT COSTS RECOMMENDED
01	114,831	96,595
02	127,058	107,910
03	89,811	69,706

APPLICANT'S ABSTRACT:

Sensitization and classical conditioning are two forms of learning, respectively non-associative and associative, that occur throughout the animal kingdom, including in man. In the marine mollusc Aplysia, both sensitization and classical conditioning involve increases in transmitter release, called heterosynaptic facilitation, from mechanoreceptor sensory neurons of the pathways that mediate defensive withdrawal behaviors.

A number of cellular phenomena accompany this facilitation, among them a reduction in potassium current, an increase in spike duration and number, and an alteration in the handling of calcium. Earlier work showed that facilitation involves mobilization of a biochemical cascade that results in a rise in intracellular cyclic adenosine monophosphate (cAMP) and the consequent phosphorylation of neuronal substrates by cAMP-dependent protein kinase.

The proposed project has a threefold aim:

1. To re-examine the role of cAMP in facilitation. This question is prompted by preliminary experiments that suggest that an increase in cAMP alone may be insufficient to account for facilitation.
 2. To determine which of the cellular phenomena associated with facilitation are causal and which are not, and to determine how much of the facilitation can be accounted for by each process.
 3. To examine the cellular phenomena associated with activity-dependent amplification of facilitation to determine whether, as has been proposed, classical conditioning involves only enhancement of processes that underlie sensitization, or whether new mechanisms are involved.
- These questions will be addressed by examining 1) the effects on facilitation of treating sensory neurons with newly-available agents that influence the cAMP cascade; 2) the time courses of, and the effects of different manipulations on, each of the facilitation-associated phenomena, compared to those of the facilitation itself; and 3) cellular correlates of activity-dependent amplification of facilitation, a mechanism underlying classical conditioning.

FINAL ACTION: May 22-23, 1989

Application Number: **1 K02 IN00422-01**

Project Title: RELATING SYNAPTIC MODIFICATION TO COGNITIVE FUNCTION

Approval: (UNANIMOUS) 136

10-30 BUREAU SUBJECTS INVOLVED.			
36-AVIALS INV.-NO IIR COMMENTS OR COMMENTS NOTED.			
DATE	AVIALS	AVIALS	REMARKS
01	50,200	50,200	
02	50,600	50,600	
03	51,000	51,000	
04	51,400	51,400	
05	58,050	58,050	

The long-term, overall goal of this project is to understand the neural bases of mental processes. Though it is probably impossible to underestimate the difficulties that might impede progress toward this goal, if we do not explicitly try to reach it, then progress will be at best random.

I have been encouraged to work on this problem because of the complimentary convergence of three disciplines. First, is the increasing incidence over the last 13 years of cognitive theories that use neuron-like elements as building blocks. These theories attempt to model the neurophysiological experiments in human pattern recognition and concept formation. Often the neuron-like building blocks involve hypothetical properties that are as yet unknown to neuroscientists. Second is work like my own that studies the role of well-defined neural activity in associatively based synaptic modification. These studies are able to test microscopically the reasonableness of the hypothesized neural properties. Third is the existence of what are necessarily precisely defined theories of statistical pattern recognition produced by engineers. The mathematical groundwork their theories provide seems eminently suited to provide a rigorous bridge for evaluating cognitive theories and the discoveries of synaptic modification.

Because the hypothesized rules of synaptic modification seem to distinguish among the various neural-like cognitive theories and because so little is really known about synaptic modification issues, our studies concentrate on constructing well controlled, easily interpreted experimental situations which allow the comparison of various theories of synaptic modification in a context amenable to both electrophysiological and electron microscopic analysis.

The research proposed here is a continuation of such studies that identify, as quantitatively as possible, the characteristics of synaptic modification. In addition, I would like to produce theories which better harmonize the cognitive and neural experimental data. I eagerly anticipate increased interactions with experimental cognitive scientists interested in neural-like theories.

FINAL ACTION: September 9-11, 1985

CONCURRENCE

Project Title: DRUG EFFECTS ON LEARNING AND MEMORY

Organization: APPROVAL

Inventory Date: 122

DATE	10-0 HUMAN SUBJECTS INVOLVED.	10-0 ANIMALS INVOLVED.	10-0 HUMAN SUBJECTS INVOLVED.	10-0 ANIMALS INVOLVED.
20A1	108,515	108,515	108,515	108,515
21	112,718	112,718	112,718	112,718
22	119,889	119,889	119,889	119,889
23	127,469	127,469	127,469	127,469
24	135,189	135,189	135,189	135,189

APPLICANT'S ABSTRACT:

The objective of this research is to increase our understanding of the neurobiological processes involved in modulating the storage of newly-acquired information. The specific aim of this research project is to investigate the interaction of amygdala noradrenergic and opiate receptor systems in modulating memory storage. Rats implanted bilaterally with amygdala cannulae will be trained on a Y-maze discrimination task and given posttraining systemic and/or intra-amygdala injections. Retention will be tested one week later by training the animals on a reversed discrimination. A first set of experiments will examine the effects, on memory, of concurrent intra-amygdala injections of agonists and antagonists affecting the two systems. A second set of experiments will examine the effects of posttraining administration of adrenergic and opiate agonists and antagonists on memory in animals given intra-amygdala injections of 6-OHDA one week prior to training. A third set of experiments will determine whether intra-amygdala injections of antagonists of one of these two receptor systems alter the effects, on memory storage, of systemic injections of compounds affecting the other receptor system. A fourth set of experiments will examine the effects, on memory, of posttraining administration of noradrenergic and opiate agonists and antagonists into other brain regions including the ventral hippocampus and the caudate-putamen. A fifth set of experiments will investigate the effects, on retention, of posttraining injections of noradrenergic and opiate compounds into specific nuclei within the amygdaloid complex. The findings of this research will increase our understanding of brain systems involved in the modulation of memory storage processes and, thus, should have implications for understanding and, ultimately, treating disorders of memory.

FINAL ACTION: FEBRUARY 9 - 11, 1987

		Application Number	1 801 HL38256-01
		Grant Number	
Review Office	NIH NEUROPSYCHOLOGY RESEARCH COMMITTEE		NS-N
Meeting Date	JUNE 1983		
Investigator	NICOLL, ROGER A		Chairman
Project			
Organization	UNIVERSITY OF CALIFORNIA		
City, State	SAN FRANCISCO, CALIF		Proposed Start Date 07/01/83
Project Title	NOREPINEPHRINE EFFECTS ON LOCAL NEURONAL CIRCUITS		
Recommendation	APPROVAL		Priority Score 136
Special Notes	NO HUMAN SUBJECTS INVOLVED.		

PROJECT YEAR	DIRECT COSTS RECOMMENDED	DIRECT COSTS RECOMMENDED	PERCENTAGE RECOMMENDED	GRANT PERIOD
01	105,507	72,618		
02	115,417	79,642		
03	126,262	84,357		
04	138,129			
05	151,121			

RESUME: This is a new application for five years of support to study the effects of norepinephrine on circuits within the hippocampus and other parts of the brain. The committee considered this an important and difficult problem which Dr. Nicoll is uniquely qualified to investigate. The committee recommended approval in reduced time and amount with enthusiasm.

DESCRIPTION: This is a new application to examine the effects of norepinephrine (NE) on local circuits in the hippocampus and in other parts of the brain. The application was originally reviewed by this committee at its February 1983 meeting at which time it was deferred for a site visit.

A site visit was performed on May 2, 1983. The members of the site visit team were Dr. Adrian Dunn, who chaired the meeting, Dr. Robert McCarley, Dr. Peter Sargent and Dr. Donald McAfee. Dr. Fred Altman was the Executive Secretary and Dr. Niles Bernick represented program staff.

Dr. Nicoll reviewed his experimental plan; following this, each member of the committee asked questions and there was a visit to Dr. Nicoll's laboratory. The findings of the site visit team are incorporated in this review.

See 2
This proposal is based on recently published and also preliminary unpublished data which suggest to the applicant that norepinephrine facilitates excitatory synaptic activity on hippocampal pyramidal cells (HPCs). The applicant hypothesizes that there are both direct and indirect actions of norepinephrine on HPCs which account for his observations. He will study these effects using the hippocampal slice preparation.

FINAL ACTION: September 19-21, 1983

SUMMARY STATEMENT
(Privileged Communication)

APPLICATION NO: 1 R01 MH45096-01
 BPN 2 GROUP: DUAL:
 REVIEW GROUP: BEHAVIORAL NEUROBIOLOGY SUBCOMMITTEE
 MEETING DATE: OCT./NOV. 88 PRG CL CD: NR-B DUAL PRG CL CD:
 INVESTIGATOR: NORDEEN, ERNEST J DEGREE: PHD
 ORGANIZATION: UNIVERSITY OF ROCHESTER RFA:
 CITY, STATE: ROCHESTER NEW YORK REQ. START DATE: 08/01/89
 PROJECT TITLE: NEURAL CHANGES ASSOCIATED W/CRITICAL LEARNING PERIODS
 RECOMMENDATION: APPROVAL PRIORITY SCORE: 125
 PERCENTILE SCORE: 20.6
 SPECIAL NOTE: 10-NO HUMAN SUBJECTS INVOLVED
 30-ANIMALS INV.-NO IRG COMMENTS OR CONCERNS NOTED

PROJECT YEAR	DIRECT COSTS REQUESTED	DIRECT COSTS RECOMMENDED
01	81,920	81,920
02	87,360	87,360
03	93,220	93,220

APPLICANT'S ABSTRACT:

The aims of this proposal are to (1) identify cellular changes in the developing avian brain that underlie "critical" or "sensitive" periods for vocal learning and, (2) to determine how such changes are influenced by the learning of song-like vocalizations. Most birds learn song by memorizing a suitable song model (sensory learning) and then using auditory feedback to mimic that model (sensorimotor learning). These two phases of vocal learning are often restricted to species-specific developmental periods believed to coincide with pivotal changes in the organization of song-related brain regions. In zebra finches, for instance, sensory and sensorimotor learning overlap with drastic changes in the number, size, and connectivity of song-related neurons. The first study proposed will employ a comparative neuroanatomical approach to define better the relationship between neural change and sensory or sensorimotor learning. Developmental changes in the anatomy of vocal nuclei will be measured in swamp sparrows, a species in which the two phases of vocal learning are well separated in time. Next, neural changes that may be necessary for memorizing a vocal model will be identified. Acoustic isolation will be used to extend the critical period for sensory learning in zebra finches. It will then be determined how this manipulation influences the timing of neural changes in developing song regions. Finally, to determine how song learning influences the organization of song nuclei, neuroanatomical measurements will be correlated with individual differences in song complexity. Also, the ability of auditory experiences to influence the growth, retention, or addition of neurons during sensory or sensorimotor learning will be assessed. Critical learning periods exist for phenomena as diverse as language acquisition, social attachment and imprinting. The proposal's long term goal is to understand the neural mechanisms underlying these periods of unique susceptibility and to determine how information may be stored through experience-dependent modifications of the developing nervous system.

FINAL ACTION: FEBRUARY 6-7, 1989

Application Number: 2 R01 MH18343-20

BPN -2
 REVIEW GROUP: BEHAVIORAL NEUROBIOLOGY SUBCOMMITTEE
 MEETING DATES: IRG: JUNE 1989 NR-B
 COUNCIL: SEPT/OCT 1989
 INVESTIGATOR: NOTTEBOHM, FERNANDO DEGREE:
 ORGANIZATION: ROCKEFELLER UNIVERSITY
 CITY, STATE: NEW YORK, NEW YORK REQUESTED START DATE: 12/01/89
 PROJECT TITLE: NEUROGENESIS IN ADULT AVIAN BRAIN
 RECOMMENDED: APPROVAL PERCENTILE: 0.9
 HUMAN SUBJECTS: 10-NO HUMAN SUBJECTS INVOLVED PRIORITY SCORE: 102
 ANIMAL SUBJECTS: 30-ANIMALS INV.-VERIFIED, NO IRG CONCERNS OR COMMENT

PROJECT YEAR	DIRECT COSTS REQUESTED	DIRECT COSTS RECOMMENDED
20	151,870	151,870
21	160,982	160,982
22	170,641	170,641
23	180,880	180,880
24	191,732	191,732

ADAPTED FROM APPLICANT'S ABSTRACT:

Work described in this proposal uses neurogenesis and neuronal replacement in adult avian brain as a model for brain self-repair. The long term objective is to be able to induce neurogenesis and neuronal replacement in adult human brain as a way to correct for cell losses resulting from injury or disease. Various experimental methods will be used to identify the stem cells for neurogenesis, subsequent stages of cell division and migrations, and the associations formed by the newly differentiated neurons. Some of these methods will also help identify the events that trigger and guide neurogenesis in the adult avian brain. Methods to be used include: 1) tritiated thymidine to mark dividing cells and newly formed cells; 2) fluorogold as a marker of projection neurons that link different parts of the brain; 3) doxorubicin, a retrogradely transported fluorescent cytotoxin, to selectively kill a set of projection neurons; 4) kainic acid, to kill local populations of neurons; 5) cytosine arabinofuranoside hydrochloride, an antimitotic agent that interrupts cell proliferation by killing dividing cells; 6) tritiated leucine, to measure protein synthesis or the lack thereof, the latter as harbinger of cellular death; 7) a replication defective retrovirus, to mark the clonal descendants of a single cell. The investigator expects that this combination of approaches will provide information about ways to induce and guide neurogenesis in the adult avian brain.

Date Released: 08/21/89

Date Printed: 08/22/89

Acquisition Number: 2 R01 NS25281-14
 Grant Number:
 Review Group: **BNP -2**
 Reviewing Office: **BEHAVIORAL NEUROBIOLOGY SUBCOMMITTEE** **NR-R**
 Reviewing Date: **FEB/MARCH 1987**
 Investigator: **SOUTHWORTH, ARYEN** **FED**
 Reviewer:
 Organization: **NORTHWESTERN UNIVERSITY**
 City, State: **EVANSTON ILLINOIS** **07/01/87**
 Project Title: **SEBASTY CONSOLIDATION LOCALIZATION**
 Recommendation: **APPROVAL** **Priority Score: 133**
 Special Notes: **10-NO HUMAN SUBJECTS INVOLVED.**
30-ANALS INV.-VERIFIED, NO INC CONCERNS OR COMMENT

PROJECT YEAR	DIRECT COSTS REQUESTED	DIRECT COSTS RECOMMENDED
14	157,892	119,921
15	162,681	120,913
16	178,949	133,005
17	196,844	146,304
18	216,529	

APPLICANT'S ABSTRACT:

Rapid post-translational modification of brain phosphoprotein may mediate the rapid onset of synaptic modifications that underlie synaptic plasticity. The phenomenon of long-term potentiation (LTP) involves a rapid dramatic change in synaptic activation which is persistent for days or even months. Because of its relation to models of information storage and memory we have studied the effect of LTP on specific identifiable brain phosphoproteins, to determine their particular role in LTP. By using different methods to preserve the *in vivo* state of these proteins, it is possible to show that LTP increases the state of phosphorylation of a specific protein, protein VI (molecular weight 47,000; isoelectric point, 4.5) and that this increase is due to the activation of a specific enzyme, protein kinase C. We now propose to micro-inject chemical agents that can stimulate protein kinase C or inhibit its action to establish whether this enzyme is both necessary and sufficient for synaptic plasticity. Because LTP can be controlled, both with regard to extent and time course (up to 3 months in long term studies) the time frame for protein kinase C participation in LTP can be identified. The identification of protein VI and protein kinase C important for regulating information flow and registration in the central nervous system may provide new insights into diseases of memory such as presenile dementia of the Alzheimer's type.

FINAL ACTION: MAY 18 - 20, 1987

SUMMARY STATEMENT
(Privileged Communication)

APPLICATION NO: 1 R01 MH44346-01

REVIEW GROUP: BPN 1 GROUP: DUAL: MS
CELLULAR NEUROBIO & PSYCHOPHARM SUBCOM

MEETING DATE: FEB./MARCH 88 PRG CL CD: NRA DUAL PRG CL CD: AD

INVESTIGATOR: SIGGINS, GEORGE R DEGREE: PHD

ORGANIZATION: SCRIPPS CLINIC AND RESEARCH FOUNDATION RFA:

CITY, STATE: LA JOLLA, CALIFORNIA REQ. START DATE: 07/01/88

PROJECT TITLE: SONATOSTATIN AND BRAIN FUNCTION

RECOMMENDATION: APPROVAL PRIORITY SCORE: 131

SPECIAL NOTE: 10-HO HUMAN SUBJECTS INVOLVED
30-ANIMALS INV.-NO IRG COMMENTS OR CONCERNS NOTED

PROJECT YEAR	DIRECT COSTS REQUESTED	DIRECT COSTS RECOMMENDED
01	102,241	102,241
02	94,869	94,869
03	111,684	102,684
04	111,147	111,147
05	120,312	120,312

APPLICANT'S ABSTRACT:

The long-range objectives of this proposal are to determine the physiological effects and mechanisms of action of the neuropeptide family of somatostatin-derived peptides (SSs) and the functional role of endogenous somatostatins. Other major objectives are to investigate possible interactions of the SSs with other transmitter candidates and to correlate neuronal SS responsiveness with immunohistochemical indices of SSergic innervation. Preliminary electrophysiological studies of the SSs suggest that the K⁺ conductance known as the M-current is enhanced by SS14 and SS28, leading to the suggestion that SSs may function to clamp the neuronal membrane potential at resting levels. Thus, SS may play a major role in reducing responses to excitatory amino acids (glutamate and NMDA) and therefore could be involved in certain brain phenomena such as long-term potentiation (LTP; a model of learning), hyperexcitability and excitotoxicity. The SS potentiation of cholinergic effects (seen previously) could also be significant with respect to memory processes and also to Alzheimer's dementia. The specific aims of this proposal are therefore to: 1) characterize the physiological mechanisms of action of SS; 2) further characterize SS interactions with other transmitters; 3) seek anatomical correlates of SS responses; 4) determine if SSs, with or without ACh, alter LTP in the hippocampus; 5) determine if SSs alter low-Mg⁺⁺ induced neuronal hyperexcitability. To achieve these aims, intracellular current-clamp and single electrode voltage-clamp recording of neurons in several in vitro brain slice preparations will be used, including those from the hippocampus CA1, dentate gyrus, complex of the solitary tract, and cerebral cortex. SSs, acetylcholine, GABA, glutamate, NMDA, CRF and other drugs will be applied by superfusion or locally via pipette. Pathway stimulation and/or treatment with a SS antagonist, cycloamine or antibodies to SS will be used to determine the role of endogenous SSs. Intracellular injection of Lucifer Yellow and immunohistochemical staining of SS-containing fibers will provide anatomical correlates. These studies will help to clarify the sites and mechanisms of action of the SS peptides, and perhaps lead to therapeutic use of synthetic SS peptides in clinical disease states.

FINAL ACTION: MAY 16-18 1988 11 7

APPLICATION NO: 1 R29 MH44052-01

REVIEW GROUP: BPN 2 GROUP: DUAL:
BEHAVIORAL NEUROBIOLOGY SUBCOMMITTEE

MEETING DATE: FEB./MARCH 88 PRG CL CD: NRA DUAL PRG CL CD:

INVESTIGATOR: STEINHETZ, JOSEPH E DEGREE: PHD

ORGANIZATION: INDIANA UNIVERSITY RFA:

CITY, STATE: BLOOMINGTON INDIANA REQ. START DATE: 07/01/88

PROJECT TITLE: THE INTERPOSITUS NUCLEUS AND CLASSICAL NM CONDITIONING

RECOMMENDATION: APPROVAL PRIORITY SCORE: 130

SPECIAL NOTE: 10-HO HUMAN SUBJECTS INVOLVED
30-ANIMALS INV.-NO IRG COMMENTS OR CONCERNS NOTED

PROJECT YEAR	DIRECT COSTS REQUESTED	DIRECT COSTS RECOMMENDED
01	80,844	71,844
02	47,655	47,655
03	43,494	40,494
04	47,124	44,124
05	69,971	67,971

APPLICANT'S ABSTRACT:

Impairments in the learning and memory of even the simplest of tasks can be extremely disruptive to normal functioning and, in the long term, affect both mental and physical health. To fully understand impairments of learning and memory, it is necessary to understand how the brain alters activity to produce learning and memory. To this end, the long term goal of the proposed research is to describe neuronal mechanisms and processes that form the basis of simple forms of learning and memory. More specifically, the proposed experiments are designed to study of the involvement the cerebellar deep nuclei (i.e., the interpositus nucleus) in classical conditioning, a simple form of motor learning. Three phases of experimentation are proposed: 1) a characterization of the patterns of critical stimulus inputs into the interpositus nucleus, 2) a description of potential alterations of activity of the interpositus nucleus during classical conditioning, and 3) the development of a reduced preparation amenable to future intracellular study of neuronal mechanisms involved in classical conditioning. In all three phases of the proposed experimentation, extracellular field potentials and single unit activity evoked by stimulation of precerebellar afferents will be monitored to assess interpositus activity. It is anticipated that these studies will provide valuable data concerning activity of the interpositus nucleus during classical conditioning.

FINAL ACTION: May 16-18, 1988

Application Number: 1 P50 MH45156-01A1

Review Group:	SRCM-H (01) SPECIAL REVIEW COMMITTEE - NIMH	
Meeting Dates:	IRG: OCT/NOV 1989 COUNCIL: JAN/FEB 1990	NR
Investigator:	STRICKER, EDWARD M	Degree: PHD
Organization:	UNIVERSITY OF PITTSBURGH	Requested Start Date: 04/01/90
City, State:	PITTSBURGH, PENNSYLVANIA	
Project Title:	BEHAVIORAL NEUROSCIENCE AND SCHIZOPHRENIA	
Recommended:	APPROVAL	Percentile: 18.1*
Human Subjects:	30-HS INV-CERTIFIED NO IRG CONCERNS/COMMENTS	Priority Score: 123
Animal Subjects:	30-ANMLS INV.-VERIFIED, NO IRG CONCERNS OR COMMENT	

PROJECT YEAR	DIRECT COSTS REQUESTED	DIRECT COSTS RECOMMENDED
01A1	859,793	688,628
02	959,375	758,306
03	1,045,639	823,766
04	1,112,996	0
05	1,194,851	0

OVERALL RESUME: This is a resubmission of a proposal for a Center for Neuroscience and Schizophrenia (CNS) from the University of Pittsburgh. The proposal has an Administrative Core (Core A) headed by Dr. Edward Stricker, Director of the CNS, and including three Associate Directors, Drs. Kupfer, Tuma, and Zigmond. Core A will be responsible for the administration and overall scientific direction of the CNS. The Directors will be assisted by a Scientific Coordinating Committee consisting of Program Directors, Center Directors, Dr. Sam Gershon, and a distinguished external Scientific Advisory Board. In addition to administering the Center, Core A will direct an innovative seed-money small grant program.

In addition to Core A, there will also be a Clinical Core (Core B) directed by Dr. Mina Schooler, with Associate Director, Dr. Matcheri Keshavan. Core B will be responsible for the recruitment of never-medicated psychotic patients, normal IQ-autistic adults, and never mentally ill adult control subjects who will be demographically matched, and to whom a standard diagnostic and clinical state evaluation schedule will be administered. These subjects will be used in the magnetic resonance imaging (MRI) studies proposed in Program 4 and in the ongoing studies of immune function, sleep, and cognitive function underway at the University of Pittsburgh. Four specific programs in addition to the two cores constitute this proposal: they are investigations of the contribution of phencyclidine (PCP) and of N-methyl-D-aspartate (NMDA) receptors to the network properties of the hippocampal formation; definition

Date Released: 12/19/89

Date Printed: 12/19/89

APPLICATION NO: 1 .01 MH45075-01
 BPN 2 GROUP: DUAL:
 REVIEW GROUP: BEHAVIORAL NEUROBIOLOGY SUBCOMMITTEE
 MEETING DATE: OCT./NOV. 88 PRG CL CD: NR-B DUAL PRG CL CD:
 INVESTIGATOR: VERTES, ROBERT P DEGREE: PHD
 ORGANIZATION: MERCER UNIVERSITY RFA:
 CITY, STATE: MACON GEORGIA REQ. START DATE: 04/01/89
 PROJECT TITLE: BRAINSTEM MODULATION OF THE HIPPOCAMPUS
 RECOMMENDATION: APPROVAL PRIORITY SCORE: 117
 PERCENTILE SCORE: 10.9
 SPECIAL NOTE: 10-NO HUMAN SUBJECTS INVOLVED
 30-ANIMALS INV.-NO IRG COMMENTS OR CONCERNS NOTED

PROJECT YEAR	DIRECT COSTS REQUESTED	DIRECT COSTS RECOMMENDED
01	115,340	115,340
~~02~~ 3	84,152	84,152
~~03~~ 4	88,330	88,330
~~04~~ 5	92,597	92,597
~~05~~ 6	97,210	97,210

APPLICANT'S ABSTRACT:

In early reports^{1,2} we identified a population of cells within the pontine reticular formation (PRF) of the rat with activity highly correlated with the theta rhythm of the hippocampus. In subsequent studies^{3,4} we showed that electrical stimulation of this same PRF region produced pronounced hippocampal theta. In mapping the brainstem for its synchronizing (theta) effects on the hippocampus, we also demonstrated that stimulation of the median raphe (MR) nucleus desynchronized the hippocampal EEG.⁴ We proposed that the PRF (predominantly nucleus pontis oralis) and the MR are directly involved in generating states of hippocampal synchronization and desynchronization, respectively. Our most recent work⁵⁻⁹ has concentrated on anatomically defining PRF and MR pathways to the medial septum-vertical limb of the diagonal band nuclei (MS-DBV) -- the site of the pacemaking cells that directly control the hippocampal EEG. In brief, we have demonstrated pronounced projections from the MR to the MS-DBV, but very few direct projections from the PRF to the MS-DBV. We now suggest that the supramammillary nucleus (SUM) may serve as an important link between the PRF and the MS-DBV involved in hippocampal theta generation.

The proposed studies are designed to precisely define brainstem to septohippocampal systems involved in controlling states of hippocampal synchronization and desynchronization. Specifically, we intend to examine: (1) the relationship of unit activity in the PRF, MR and SUM to the hippocampal EEG in the behaving rat; (2) the effects of cellular destruction of these same three nuclei on the hippocampal EEG; (3) afferents to the PRF; (4) PRF projections to the SUM; (5) MR and SUM projections to ChAT-containing cells of the MS-DBV and (6) the distribution of 5-HT and non 5-HT median raphe fibers to the MS-DBV.

Several recent reports¹⁰⁻¹⁷ have shown that hippocampal long term potentiation (LTP) is optimally induced with stimulation at theta frequency and it has been suggested that the theta rhythm may represent an endogenous system for memory.^{10,11,14-18} To our knowledge, our laboratory is the only one that is currently examining the source(s) for the generation of the theta rhythm within the brainstem. If, as indicated, theta proves to be critically involved in memory, we believe that it is important to fully understand neural mechanisms responsible for its generation.

FINAL ACTION: FEBRUARY 6-8, 1989

SUMMARY STATEMENT
(Privileged Communication)

APPLICATION NO: 2 R01 MH40900-03
 REVIEW GROUP: BPN 2 GROUP: DUAL: BEHAVIORAL NEUROBIOLOGY SUBCOMMITTEE
 MEETING DATE: FEB./MARCH 88 PRG CL CD: HR DUAL PRG CL CD:
 INVESTIGATOR: VICARIO, DAVID S DEGREE: PHD
 ORGANIZATION: ROCKEFELLER UNIVERSITY RFA:
 CITY, STATE: NEW YORK NEW YORK REQ. START DATE: 07/01/88
 PROJECT TITLE: SENSORY-MOTOR REPRESENTATION OF A LEARNED SKILL
 RECOMMENDATION: APPROVAL PRIORITY SCORE: 139
 SPECIAL NOTE: 10-NO HUMAN SUBJECTS INVOLVED
 30-ANIMALS INV.-NO IRG COMMENTS OR CONCERNS NOTED

PROJECT YEAR	DIRECT COSTS REQUESTED	DIRECT COSTS RECOMMENDED
03	96,690	96,690
04	91,591	91,591
05	94,786	94,786

APPLICANT'S ABSTRACT:

The avian song control system provides a model for many aspects of neural integration and plasticity. Songbirds learn their songs by imitating external models. The major brain nuclei involved in vocal behavior have been identified. These nuclei are sexually dimorphic and develop under hormonal influence. Lesion studies have shown that the motor pathway for song includes the telencephalic nuclei hyperstriatum ventralis, pars caudale (HVC) and robustus archistriatalis (RA). HVC projects to RA and RA projects to the caudal portion of the hypoglossal nucleus (nXIIts), which in turn controls the muscles of the syrinx, the bird's vocal organ. Recent work has shown that nXIIts and RA contain subregions involved in the control of individual syrinxal muscles. In addition, a specialized subregion of RA projects to the dorsomedial nucleus (DM) of the intercollicular area.

How is learned song represented in these brain structures? The present work uses physiological, anatomical, and behavioral methods to study the organization and operational principles of this system. Properties of both motor and sensory pathways involved in song learning and production will be studied, focussing on the function of input and output pathways to RA. The detailed organization of inputs from HVC will be studied as will the sources and nature of auditory input. The role of the projection to the midbrain nucleus DM in respiratory-vocal coordination will be examined. This organization will initially be examined in adult male birds and then in developing birds receiving controlled hormonal manipulations and auditory exposure. In addition, the central control of this behavior, including possible lateralization phenomena, will be studied using recordings from HVC, RA and syrinxal muscles in awake, singing birds.

The results of this investigation will help to elucidate the way in which perceptual and motor components of a learned skill are represented in the brain, including their coexistence or segregation into separate hemispheres. A better understanding of the principles involved in this form of memory may in turn reveal conditions that encourage or limit learning.

FINAL ACTION: May 16-18, 1988

Application Number: 2 R01 MH40090-04A1

BPN -2
 REVIEW GROUP: BEHAVIORAL NEUROBIOLOGY SUBCOMMITTEE
 MEETING DATES: IRG: JUNE 1989 NR - B
 COUNCIL: SEPT/OCT 1989
 INVESTIGATOR: VOLPE, BRUCE T Degree: MD
 ORGANIZATION: BURKE REHABILITATION CENTER
 CITY, STATE: WHITE PLAINS, NY Requested Start Date: 12/01/81
 PROJECT TITLE: BEHAVIOR/HISTOPATHOLOGY OF MODEL OF CEREBRAL ISCHEMIA
 Recommended: APPROVAL Percentile: 18.4
 Human Subjects: 10-NO HUMAN SUBJECTS INVOLVED Priority Score: 114
 Animal Subjects: 30-ANIMALS INV.-VERIFIED, NO IRG CONCERNS OR COMMENT

PROJECT YEAR	DIRECT COSTS REQUESTED	DIRECT COSTS RECOMMENDED
04A1	114,438	114,438
05	121,886	121,886
06	129,719	129,719

ADAPTED FROM APPLICANT'S ABSTRACT: The generalized interruption of human cerebral circulation, as occurs after cardiac arrest, causes acute ischemic neuronal damage in "selectively vulnerable" regions of grey matter, particularly the hippocampus, and chronic changes characterized by retrograde degeneration and atrophy. Moreover, generalized ischemia often results in cognitive deficits in man. The investigators' work is aimed at understanding the pathological functional consequences of ischemia using an animal model. In rats, exposure to ischemia by method of four vessel occlusion causes diffuse damage that is most severe in the CA1 hippocampus, a region thought to be important for memory function. They have demonstrated that post ischemic animals have impaired spatial memory. To analyze the role of the hippocampus in the behavioral alterations of four vessel occlusion animals, the investigators will compare the effect of ischemic injury and focal neurotoxin injury. These studies will require the development of quantitative histochemical and stereological methods to analyze the extent of acute injury in the hippocampus and other brain regions. They will also use immunohistological and tracer techniques to identify and quantitate the neuronal injury that results from secondary pathological processes such as retrograde or transneuronal degeneration.

These experiments could lead to insights about the acute and chronic pathological processes consequent to ischemic cerebral disease in man. The analysis of the secondary pathological processes will help provide information

Date Released: 08/21/89

Date Printed: 08/22/89

APPLICATION NO: 2 R01 MH26783-13
 REVIEW GROUP: BPN 1 GROUP: DUAL:
 CELLULAR NEUROBIO & PSYCHOPHARM SUBCOMM
 MEETING DATE: JUN 88 PRG CL CD: NR-H DUAL PRG CL CD:
 INVESTIGATOR: WURTHAN, RICHARD J DEGREE: MD
 ORGANIZATION: MASSACHUSETTS INSTITUTE OF TECHNOLOGY RFA:
 CITY, STATE: CAMBRIDGE MA REQ. START DATE: 01/01/89
 PROJECT TITLE: PSYCHOPHARMACOLOGICAL EFFECTS OF EXOGENOUS CHOLINE
 RECOMMENDATION: APPROVAL PRIORITY SCORE: 115
 PERCENTILE SCORE: 8.7
 SPECIAL NOTE: 30-HS INV.-CERTIFIED NO IRG CONCERNS OR COMMENTS
 30-ANIMALS INV.-NO IRG COMMENTS OR CONCERNS NOTED

PROJECT YEAR	DIRECT COSTS REQUESTED	DIRECT COSTS RECOMMENDED
13	176,940	176,940
14	187,557	187,557
15	198,810	198,810
16	210,739	210,739
17	223,583	223,583

APPLICANT'S ABSTRACT:

Our ability to understand and treat some behavioral disorders has benefitted greatly from our expanding knowledge about the biochemistry and pharmacology of monoamine neurotransmitters. Although abundant evidence indicates that brain acetylcholine (ACh) is also involved in behavioral diseases, much less basic information is available about this transmitter, and few if any drugs exist which can be given chronically to enhance cholinergic CNS transmission. Our proposal studies focus on a poorly-understood and perhaps-unique aspect of cholinergic neurons, i.e., their use of choline as a precursor for both ACh and such membrane phospholipids as phosphatidylcholine (PC; lecithin).

We and others previously showed that supplemental choline could increase the syntheses of both ACh (particularly in frequently-firing neurons) and phosphocholine (an intermediate in PC synthesis). More recent studies have shown that the choline in neuronal PC is, in fact, used for ACh synthesis, and that, when choline is in short supply, the brain used it for this purpose preferentially, at the expense of membrane phospholipids. When superfused slices of rat striatum were depolarized repeatedly without adequate external choline, this PC was depleted, and most of its choline content would be accounted for by released ACh. Moreover, the other major membrane phospholipids, phosphatidylserine (PS) and phosphatidylethanolamine (PE), as well as membrane proteins, also were depleted, suggesting a relationship between neuronal depolarization and membrane levels. These reductions could all be blocked (and ACh release enhanced) by adding adequate choline to the medium. Moreover, choline's actions may be potentiated by cytidine or 4-aminopyridine, and its incorporation into neuronal PC enhanced by PS.

Proposed studies examine the biochemical mechanisms, tissue distribution, and functional consequences of these changes in membrane phospholipids, using cholinergic cell lines (LAM-2; NG 108-15; PC-12), superfused rat brain slices, synaptosomes, and whole animals. We will also continue studies (on human brain samples) which suggest that related abnormalities occur in Alzheimer's disease, and will determine whether psychotropic drugs (which can cause tardive dyskinesia) affect PC metabolism in cholinergic neurons.

SUMMARY STATEMENT
(Privileged Communication)

Application Number: 2 K05 MH05804-21

Review Group: RES. SCIENTIST DEV REVIEW COMM

Meeting Dates: IRG: OCT/NOV 1989 HB-8
COUNCIL: JAN/FEB 1990

Investigator: DEMENT, WILLIAM C Degree: PhD MD

Organization: STANFORD UNIVERSITY
City, State: STANFORD, CALIFORNIA Requested Start Date: 04/01/90

Project Title: SLEEP & ITS DISORDERS

Recommended: APPROVAL Priority Score: 109

Human Subjects: 30-HS INV-CERTIFIED NO IRG CONCERNS/COMMENTS

Animal Subjects: 30-AMHS INV.-VERIFIED, NO IRG CONCERNS OR COMMENT

PROJECT YEAR	DIRECT COSTS REQUESTED	DIRECT COSTS RECOMMENDED
21	57,722	57,722
22	58,055	58,055
23	58,370	58,370
24	58,685	58,685
25	59,000	59,000

RESUME: Dr. William Dement is applying for the renewal of his Research Scientist Award (RSA) for years 21 through 25 to continue his research program on sleep, which is comprised of three parts: 1) research on the etiologies of canine and human narcolepsy, 2) research on the circadian control of sleep and wakefulness, and 3) research on the homeostatic aspects of human sleep and sleepiness/alertness. Dr. Dement is a renowned sleep researcher whose record of achievement is outstanding. Much of the current fundamental knowledge of basic sleep processes, as well as identification and treatment of specific sleep disorders, have come from his laboratory. He has published over 700 articles and notes on sleep; he has trained many, perhaps the majority, of the current leaders in sleep research, he has been and continues to be a most effective spokesperson for the entire field of somnology to both the public and the scientific community; he is the recipient of numerous awards; and he is a member of the Institute of Medicine/ National Academy of Science. He was the first to establish a sleep disorder clinic, of which there are now hundreds. There is no doubt that he will continue to be a major contributor in the sleep research field, and the proposed research is at the forefront, employing the most contemporary techniques from a variety of fields.

DESCRIPTION (Adapted from the Applicant's Abstract): This proposal is a continuation of Dr. Dement's basic and clinical research on sleep and its pathologies. Specifically, three major research programs are described.

These are: 1) Research on the etiologies of human and canine narcolepsy, which employs in vivo and in vitro investigational methods in both canines and humans to answer genetic and neurochemical questions about narcolepsy with the long range goal being the development of new clinical therapeutic strategies. This program is housed in an environment which has a large population of narcoleptic patients in a computerized clinical database and a well-established colony of dogs affected with a genetically transmitted form of narcolepsy, 2) Research on the circadian control of sleep and wakefulness, which seeks to understand the role of circadian timing systems in manifestations of sleep and wakefulness. Utilizing a sophisticated automatic scoring system with the capacity to record 128 animals simultaneously, long-term circadian sleep/wake manifestations are studied as they relate to a host of manipulations, including activity feedback to the clock, several neurochemical studies, and the interaction of sleep loss and circadian timing, and 3) Research on the homeostatic aspects of human sleep and sleepiness/alertness. This research is based on the theoretical construct that the circadian regulation of sleep and the homeostatic regulation of sleep are two independent and isolated processes. The research will test homeostatic regulation in two groups of patients with normal circadian timing. One group is the "alert" insomniac who experiences optimal daytime alertness even when experiencing the effects of reduced and disturbed sleep at night. The other group is the patient with narcolepsy where, in the face of profound sleepiness, there is no evidence of appropriate associated changes in sleep parameters. It is hypothesized in both groups that deprivation and satiation procedures will yield results which are the opposite of normal.

In the upcoming award period, there will also be the further development of a comprehensive multidisciplinary basic sleep research program.

THE APPLICANT: Dr. Dement, Professor and Director of the Sleep Research Laboratory at Stanford University, is a foremost leader in sleep research. His research also has the unique ability to bridge the gap between basic and clinical sciences.

As a medical student, he joined Professor Nathaniel Kleitman and Eugene Aserinsky, and jointly they discovered rapid eye movement sleep (REMS). He then proceeded to describe the relationship between REMS and dreaming, human all night sleep patterns, discovered REMS in animals and neonates, and showed that specific types of REMS are related to the visual experience of the dream. More recently, he discovered narcolepsy in dogs and has developed an animal model for this condition. Also, he has conducted many other studies on sleep apnea, insomnia, circadian rhythms, jet-lag, sleep loss, sleep hygiene, and daytime sleepiness. This work has resulted in the publication of 363 papers and 361 research notes.

Over his career, Dr. Dement has also enjoyed ample research grant support and has trained numerous sleep scientists. Many of the current leaders in sleep research have at one point in their career worked with Dr. Dement. In 1970, he established the world's first sleep disorders center; today there are hundreds of such centers. In 1988, Dr. Dement established the world's first major sleep research center titled the Stanford-Upjohn Center for Sleep/Wake

SUMMARY STATEMENT
(Privileged Communication)

APPLICATION NO: 1 R01 MH42547-01A2
DUAL: AG

LCR 2 GROUP: AGING SUBCOMMITTEE

REVIEW GROUP: LCR 2 GROUP: AGING SUBCOMMITTEE

MEETING DATE: FEB./MARCH 89 PRG CL CD: MB-B DUAL PRG CL CD:

INVESTIGATOR: ZEPELIN, HAROLD DEGREE: PHD

ORGANIZATION: OAKLAND UNIVERSITY RFA:

CITY, STATE: ROCHESTER MICHIGAN REQ. START DATE: 05/01/89

PROJECT TITLE: INTENSITY OF SLEEP OVER THE HUMAN LIFE SPAN

RECOMMENDATION: APPROVAL PRIORITY SCORE: 119
PERCENTILE SCORE: 19.8

SPECIAL NOTE: 30-HS INV.-CERTIFIED NO IRG CONCERNS OR COMMENTS
10-NO LIVE VERTEBRATE ANIMALS INVOLVED

PROJECT YEAR	DIRECT COSTS REQUESTED	DIRECT COSTS RECOMMENDED
01A2	117,361	117,361
02	100,694	100,694
03	102,051	102,051

APPLICANT'S ABSTRACT:

The proposed research will expand available knowledge about age-related reduction of sleep's intensity that is indicated by lowering of the auditory awakening threshold (AAT) and deterioration of delta (slow wave) activity in the EEG. Major goals are (1) to provide data on the AAT and delta activity more representative of the life span than presently available data, (2) to describe the age pattern of changes in the AAT and delta activity, their relationship with each other, and with sleep disturbance, (3) to determine whether reduction of sleep's intensity, as measured by the AAT and/or delta activity, can account for age-related sleep disturbance, and (4) to assess whether the well-known sharp decline in basal metabolic rate over the life span could underlie sleep's deterioration.

Data will be collected from 10 males and 10 females at each of the following age levels: 6 - 10, 13 - 15, 18 - 28, 35 - 45, 55 - 65, and 70 - 80. Computerized analyses of overnight recordings will provide counts of delta waves and measures of the amplitude and duration of delta activity. Whether changes in AAT and delta activity are linked to sleep disturbance will be determined by assessing their relationship with wakefulness after sleep onset and with arousal during sleep signified by computer-analyzed alpha activity in the EEG. Basal metabolic rate will be measured in each sleeper for assessment of its relationship with all the aforementioned variables.

Secondary goals include (1) evaluation of basal skin resistance as a possible measure of age-related change in sleep's intensity, and (2) evaluation of the need for an amplitude criterion for delta activity when comparing the representation of delta activity in visually scored sleep records of young and old.

FINAL ACTION: May 22-23, 1989

ITEM 7. DEPARTMENT OF HOUSING AND URBAN DEVELOPMENT

FEBRUARY 19, 1991.

DEAR MR. CHAIRMAN: This is in response to your September 24, 1990, request that the Department of Housing and Urban Development's report for inclusion in Developments on Aging be submitted to the Special Committee on Aging.

Enclosed is the requested material. We hope that our information will serve as a useful reference document.

Any questions regarding this response may be directed to Tim Coyle, Assistant Secretary for Legislation and Congressional Relations at 202-708-0005.

Very sincerely yours,

JACK KEMP.

Enclosure.

U.S. HOUSING FOR THE ELDERLY -- FISCAL YEAR 1990

The Department of Housing and Urban Development is committed to providing America's elderly with decent affordable housing appropriate to their needs. Our goal is to provide a variety of approaches so that older Americans may be able to maintain their independence, remain as part of the community, have access to supportive services, and live their lives with dignity and grace.

For example, the Administration proposed and Congress adopted as part of the National Affordable Housing Act, the "HOPE for Elderly Independence" demonstration, which is designed to combine housing assistance with supportive services to enable the frail elderly to avoid premature institutionalization.

The Department is currently evaluating its programs serving the elderly. The problems encountered in some of our programs, notably the FHA insurance program for Retirement Service Centers, have proven to be expensive to the Government and have failed to meet the needs of those intended to be served. As a consequence, the program has been terminated. However, the experience gained with the program gave the Department an opportunity for study of another alternative way to provide both housing and supportive services for the elderly. The Department will use this experience on other programs for housing elderly people.

I. HOUSING

A. SECTION 202-DIRECT LOANS FOR HOUSING FOR THE ELDERLY OR HANDICAPPED

The Section 202 Direct Loan Program is the Department's primary program for providing housing for the elderly. It provides direct Federal loans to private, nonprofit corporations to finance the construction or substantial rehabilitation of residential projects and related facilities to serve the elderly or handicapped.

The Section 202 program was enacted by the Housing Act of 1959. Originally, the program was intended to serve persons whose incomes were above public housing eligibility levels, but still insufficient to obtain adequate housing on the private market. The Housing and Community Development Act of 1974 amended Section 202 to permit the use of Section 8 housing assistance payments for eligible lower-income persons who live in projects financed under the program. These payments make up the difference between the rent established for the unit and the tenant contribution, i.e., 30 percent of adjusted gross income.

Section 162 of the Housing and Community Development Act of 1987 further amended Section 202 to ensure that the program meets the special housing and related needs of nonelderly handicapped families and individuals. Beginning in Fiscal Year 1989, projects for the handicapped were assisted by project assistance payments. Rents were not to be determined on the basis of Fair Market Rents, but are determined by the reasonable and necessary costs of operating a project for the handicapped. Rental assistance for Section 202 projects for the elderly was not changed.

During Fiscal Year 1990, the Department committed \$283 million to finance 5,110 rental housing units for the low-income elderly and \$102 million for 2,193 rental units for low-income persons with handicaps.

Loans under the program cover up to 100 percent of total development cost and may be repaid over a 40-year period at below market interest rates. During Fiscal Year 1990, the interest rate was 8-3/8 percent. For Fiscal Year 1991, the annual interest rate is 9 percent.

From reactivation of the Section 202 program in Fiscal Year 1974 through Fiscal Year 1990, approximately \$10.3 billion has been reserved, representing 4,936 projects and 226,916 units. Due to the Department's outreach efforts, minority sponsors were awarded over 16.8 percent of the total funding in Fiscal Year 1990.

When this Administration took office, the backlog of Section 202 units that had been funded but remained, sometimes for years, in the construction pipeline, was unacceptably high. The Department has undertaken an aggressive program to eliminate the backlog, and during the period of December 1989 through November 1990, approximately 12,000 Section 202 units reached the start of construction, and if current momentum continues, then further, significant reductions in the pipeline will occur. The Department will continue its efforts to structure the Section 202 program in such a way that it ensures practical and expeditious processing of this much needed housing.

The National Affordable Housing Act authorizes a restructured Section 202 funding system, under which funding would be provided through a combination of interest-free capital advances and project rental assistance. Development costs would be based on per unit cost limits adjusted by local high cost factors, rather than being limited as in many cases by fair market rents, which have created serious delays in the current program. These changes will be implemented in FY 1991.

B. SECTION 231-MORTGAGE INSURANCE FOR HOUSING FOR THE ELDERLY

Section 231 of the National Housing Act authorized HUD to insure lenders against losses on mortgages used for construction or rehabilitation of rental accommodations for persons aged 62 years or older, married or single.

Section 231 is designed solely for unsubsidized rental housing for the elderly. Nonprofit as well as profit-motivated sponsors are eligible under the program. Section 231 also permits the construction of congregate housing projects. At the end of Fiscal Year 1990, 502 projects, providing 66,697 units for elderly families, have been insured under the program. Total insurance written was \$1,169,565,127.

C. SECTION 221(d)(3) and (4)-MORTGAGE INSURANCE PROGRAM FOR MULTIFAMILY HOUSING

Sections 221(d)(3) and (4) authorized the Department to provide insurance to finance the construction or rehabilitation of rental or cooperative structures. Projects insured under Section 221 can be designed for occupancy exclusively by the elderly. The programs are available to non-profit and profit-motivated mortgagors as alternatives to the Section 231 program, which has largely been replaced by these sections for construction of housing for the elderly. Mortgages under Section 221(d)(4) may be processed and coinsured by approved coinsuring lenders.

Under Section 221(d)(4), mortgage insurance was available for Retirement Service Centers which are market rate residential rental projects for the elderly with services such as meals served in a central dining facility, housekeeping and laundry.

The program was suspended in light of a dramatic incidence of financial difficulty with projects of this type. A large percentage of Retirement Service Centers have defaulted or are experiencing financial difficulty. Losses of this magnitude are unacceptable in a program not designed to serve lower income people. Measures were taken to terminate the program.

From the beginning of the 221(d)(3) and (4) programs through Fiscal Year 1990, 11,202 projects containing 1,221,951 units were insured, for a total of \$30,748,952,736. Residents in 485,587 of the units were receiving Section 8 rental assistance.

D. SECTION 223(F)-MORTGAGE INSURANCE FOR THE ACQUISITION OR REFINANCING OF EXISTING MULTIFAMILY HOUSING PROJECTS

This program offers mortgage insurance for existing facilities, including cooperative and rental housing for the elderly, where repair needs do not warrant substantial rehabilitation. The program can be used either in connection with the purchase of a project or for refinancing only.

E. SECTION 232-MORTGAGE INSURANCE FOR NURSING HOMES, INTERMEDIATE CARE FACILITIES, AND BOARD AND CARE HOMES

The primary object of the Section 232 program is to assist and promote the construction and rehabilitation of nursing homes and intermediate care facilities. The vast majority of the

residents of such facilities are elderly. Since the beginning of the program in 1959 through September 1990, the Department has insured 1,705 facilities, providing 204,172 beds, for a total of \$3,569,940,371.

The Housing and Urban-Rural Recovery Act (HURRA) of 1983 established a Board and Care Home program for the elderly and others as part of Section 232. The program permits units with shared bedrooms and bath facilities and central kitchens. These facilities provide continuous protective oversight of the residents. There is no medical component and no Federal requirement for a certificate of need. Board and Care Homes must meet State and local licensing and occupancy requirements.

F. SECTION 236-MORTGAGE INTEREST REDUCTION PAYMENTS

Section 236 of the National Housing Act has assisted private owners build and operate rental housing wholly or partially for the elderly. The program provides mortgage interest reduction payments to owners, thereby reducing tenant rents. Mortgages under this program can be HUD insured. Section 236 projects may include self-contained apartments, congregate facilities or a combination of the two. Projects may contain cafeterias or dining halls, community room, workshop, health care services and other essential services. Eligible lower-income tenants in many Section 236 projects receive other forms of rental assistance, including Section 8 housing assistance payments.

G. SECTION 8-RENTAL ASSISTANCE AND HOUSING VOUCHERS

Section 8 of the United States Housing Act of 1937 authorizes housing assistance payments to aid lower-income families in renting decent, safe, and sanitary housing. Section 8 provides rental assistance for families in a variety of housing types, including new construction, substantial and moderate rehabilitation, and existing housing. Under the programs, assisted families generally pay 30 percent of adjusted income toward rent and HUD pays the difference between that and the rent for an adequate housing unit. As of September 30, 1990, approximately 46 percent of the Section 8 units were occupied by elderly and handicapped persons.

The Section 8 Existing Housing Certificate program has proved particularly helpful to elderly families, because many of them are eligible to receive assistance while remaining "in place" within a dwelling unit which meets HUD's housing quality standards. As of September 1990, approximately 945,000 units were reserved for the Certificate program.

Housing vouchers, which also enable families to receive assistance without moving, are believed to be even more beneficial to elderly persons because of the additional flexibility offered by the absence of rent ceilings. Cumulatively through Fiscal Year 1990, approximately 250,000 vouchers were reserved.

Authorization is provided also for shared housing arrangements under Section 8 programs. One shared housing arrangement of particular interest to elderly families permits homeowners to rent space in their homes to tenants who receive rental assistance. Such arrangements may facilitate reduced housing costs, companionship, and security for the elderly.

Single Room Occupancy (SRO) housing is another option which some localities may find especially beneficial for certain segments of the elderly population. SRO's are eligible for assistance under the Section 8 Moderate Rehabilitation program, Certificate, and the Housing Voucher programs.

H. HOPE FOR ELDERLY INDEPENDENCE

The Administration's Homeownership and Opportunity for People Everywhere (HOPE) initiative proposed a new demonstration to test the effectiveness of combining housing voucher and supportive services assistance to enable frail elderly individuals to continue to live independently. This "HOPE for Elderly Independence" initiative is included in the National Affordable Housing Act of 1990. For many individuals, who are faced with increasing infirmity, or recovering from an illness or injury, the only choice is to enter a nursing home to receive supportive services. Such supportive services are very costly in a nursing home situation and may be much more intensive than needed. However, there are few other alternatives.

Currently, HUD's only program which provides both housing and supportive services assistance is the project-based Congregate Housing Services program (CHSP). That program provides funding for supportive services in elderly public housing and Section 202 projects. Thus, the services provided are only available to those individuals who live in the 59 projects currently approved to participate in CHSP or are willing to move into such projects.

This demonstration would allow frail elderly individuals more choice in determining where they want to live, since supportive services would not be limited to specific projects or units. They would even be able to remain in their present units, as long as their units meet the Section 8 Housing Quality Standards. The public housing agency (PHA) (including an Indian Housing Authority (IHA)) would be authorized, however, to require individuals to live in a specific geographic area, if that is necessary to make the provision of supportive services feasible.

Unlike CHSP, which provided "gap" funding of supportive services, this demonstration would only require HUD to provide 40 percent of the supportive services funding. This reduction in the percentage of HUD's funding responsibilities is designed to correct a problem found in CHSP--payments for unnecessary services.

Funding for supportive services is available from many sources, but coordination of these resources and the targeting of them to very low-income frail elderly individuals has been difficult. By requiring applicants to secure at least 50 percent of the services funding needed from other sources, HUD would be using its funding to leverage these other funding sources. In addition, by requiring that at least 50 percent of the funding be from State, local, and private sources, and Federal programs that fund social service activities, HUD would hope to minimize the use of unnecessary services.

This demonstration would provide housing assistance and supportive services for a five-year period. It would require that frail elderly individuals receive both housing assistance and services, rather than simply making supplementary supportive services available on an optional basis to those individuals currently receiving housing assistance. Services which can be funded include assistance with bathing, dressing, toileting, and mobility, case management, counseling, supervision, and other services essential to achieving and maintaining independent living. The demonstration would require that the program be targeted to those frail elderly individuals who need at least three of these services in order to live independently and that the services provided be tailored to each individual's needs. Awarding of funds for supportive services and housing vouchers and certificates under the demonstration would be made through a national competition. An evaluation of the effectiveness of the demonstration in enabling frail elderly individuals to live independently would be an integral part of the demonstration.

I. CONGREGATE HOUSING SERVICES PROGRAM

The Congregate Housing Services Program was designed to demonstrate the cost-effectiveness of providing supportive services for the elderly and handicapped under HUD auspices to prevent or delay unnecessary institutionalization. Under this program, HUD extends multi-year grants (3 to 5 years) to eligible public housing agencies and non-profit Section 202 sponsors for meals and other support services for frail elderly and non-elderly handicapped residents. As of September 30, 1990, \$34,236,000 has been obligated to grantees.

Fifty-nine grantees are in operation, servicing approximately 1,783 residents on a regular basis. Approximately 149 residents were served last year on a short-term, temporary basis, usually after incapacitation or hospitalization. Congress appropriated \$5.9 million for Fiscal Year 1990. These funds are being used to extend the 59 grants for at least an additional 12 months from current expiration dates. The renewals are processed consistent with each grantee's current expiration date.

The National Affordable Housing Act establishes a revised Congregate Housing Services Program (CHSP) and allows payment for the cost of service coordinators in those elderly housing projects that have a significant number of frail elderly residents that provide a range of supportive services for those eligible frail elderly. HUD will develop regulations to implement this revised CHSP in FY 1991.

J. MANUFACTURED HOME PARKS

The Housing and Urban-Rural Recovery Act (HURRA) of 1983 amended Section 207 of the National Housing Act to permit mortgage insurance for manufactured home parks exclusively for the elderly. The program has been operational since the March 1984 publication of a final rule implementing the legislation.

K. HOME EQUITY CONVERSION MORTGAGE INSURANCE DEMONSTRATION

The Department has implemented a program to insure Home Equity Conversion Mortgages (HECM's), also known as "reverse mortgages." The program is designed for persons aged 62 years or older. Under the Housing and Community Development Act of 1987, the Department was authorized to insure 2,500 reverse mortgages. Reservations of insurance authority were allocated among the ten HUD Regions in proportion to each Region's share of the Nation's elderly homeowners. In February 1989, the Regional Offices of Housing held random drawings. A total of 50 lenders were selected; each received 50 reservations. In late 1990 the Omnibus Budget Reconciliation Act (OBRA) of 1990 increased the statutory authority to 25,000 mortgages and extended the termination date of the demonstration to September 30, 1995. Accordingly, the lender allocation and reservation procedure is being terminated and any FHA-approved lender may participate in this program without restrictions.

Reverse mortgages allow borrowers to convert the equity in their homes into a monthly stream of income or a line of credit. A borrower may choose from among four basic payment options: (1) tenure - provides a borrower with level monthly payments for a principal residence; (2) term - provides level monthly payments for a fixed period selected by the borrower; (3) line of credit - permits the borrower to make draws up to a maximum amount at times and in amounts of his or her choosing; (4) tenure or term combined with a line of credit. A borrower is never required to pay back the loan as long as he or she is living in the property as his or her principal residence. If the borrower moves or dies and the property is sold, HUD will insure lenders against losses that could occur if the proceeds from the sale of the property are not sufficient to pay off the mortgage balance.

To date, 657 cases are either in progress or have been endorsed. The heaviest concentration of use has been in the Northeast region. An interim report on the program was sent to Congress on October 1, 1990.

II. PUBLIC AND INDIAN HOUSING

Approximately 482,209 public housing dwellings (40 percent of the total program inventory nationally) are occupied by the elderly. Many of the dwellings are in buildings designated for exclusive occupancy by the elderly and handicapped.

The Public Housing program is the Nation's oldest and largest housing program for lower-income people, established under the U.S. Housing Act of 1937. It is an essentially local program, based on a partnership between the local community and the Federal Government. Each community, through its Public Housing Agency (PHA) in cooperation with the local governing body, takes primary responsibility for providing housing to lower-income people, with financial assistance from the Federal Government. Projects are developed, maintained, and operated by approximately 3,300 PHAs (including about 300 Indian Housing Authorities) in communities throughout the country, ranging from the largest cities and suburbs to small towns and rural areas. Public Housing, which is owned by the PHA (or in a relatively few instances leased), is distinct from the Section 8 housing assistance payment programs also administered by many PHAs.

In the Public Housing program, the Federal Government--through the local PHA--pays for development costs and provides operating subsidies to ensure that low rents and adequate services are available. In addition, modernization funds are provided to PHAs to enable them to rehabilitate older projects. As a condition for this assistance, the PHA agrees to use and maintain the property as decent, safe, and sanitary housing for eligible lower-income people, consistent with the requirements of Federal law and regulations. Rents, including utilities, have been set by Congress at 30 percent of adjusted tenant income. In calculating adjusted income, some special deductions are made in the case of the elderly.

In many public housing projects, special facilities and services are provided to meet the needs of the elderly, such as safety and security features, meals and transportation services, and recreational programs. These special services are usually provided by other agencies that rely on funding from Federal, State, and private sources, with the PHA supplying the facilities and acting as the local coordinator.

In general, these projects have been very successful in meeting the needs of their elderly and handicapped residents. Standards of design and maintenance have been high, along with resident satisfaction. PHAs report that elderly residents are excellent tenants and citizens, who take pride in their homes and play important roles in management and service programs.

Development of new public housing is no longer the principal vehicle for producing additional dwellings for the lower-income elderly under Federal housing programs. Other programs--such as the Section 202 program and Section 8 certificates and vouchers--now account for the bulk of the units added in recent years. With regard to public housing, amendments enacted by the Congress in 1983 and 1984 require that the Department give priority in approving new applications to projects for families requiring three or more bedrooms. The primary emphasis with regard to public housing for the elderly has become preservation, maintenance, and rehabilitation of the existing housing stock.

III. COMMUNITY PLANNING AND DEVELOPMENT

A. COMMUNITY DEVELOPMENT BLOCK GRANT ENTITLEMENT PROGRAM

The Community Development Block Grant (CDBG) Entitlement program is HUD's major source of funds to large cities and urban counties for a wide range of community development activities. These activities help low- and moderate-income households, eliminate slums and blight, or meet other urgent community development needs. The CDBG program made approximately \$3 billion available to States and communities in 1989, the most recent year for which complete data is available. Approximately \$2 billion of this sum went to 737 metropolitan cities and 121 urban counties by entitlement, with individual amounts determined by formula.

Entitlement communities undertake a wide range of eligible activities in which elderly residents may benefit either directly or indirectly. The CDBG program is decentralized, and local communities are not required to report program beneficiaries by age. For this reason, it is difficult to determine the exact amount of CDBG funds that directly address the needs of the elderly. However, available data indicates that Entitlement communities budgeted \$27 million in Fiscal Year 1989 to assist senior citizen centers. Metropolitan cities planned to use \$19 million for this purpose, and urban counties, \$8 million. Housing-related activities -- primarily rehabilitation -- constitute the primary use of Entitlement funding. These activities accounted for approximately \$836 million or 34 percent of all CDBG Entitlement expenditures in 1989. Housing rehabilitation activities include major renovations, minor home repairs, and weatherization services to owner and tenant occupied properties. Many local communities target some of these activities to benefit elderly homeowners and tenants.

Significant amounts of CDBG Entitlement spending for neighborhood improvements, public services, and other public works, directly or indirectly benefit the elderly. CDBG Entitlement grantees allocated about \$61 million for improvements to and operation of neighborhood facilities, \$14 million for the removal of architectural barriers, \$1.4 million for centers for the disabled, and \$97.7 million for other public facilities. Such activities provide significant benefits to the elderly.

B. CDBG STATE AND SMALL CITIES PROGRAM

The State Community Development Block Grant and HUD-Administered Small Cities programs are HUD's principal vehicles for assisting communities under 50,000 population that are not central cities. States and small cities use the CDBG funds to undertake a broad range of activities and structure their programs to give priority to eligible activities that they wish to emphasize.

As in the CDBG Entitlement program, States are not required to report to HUD the ages of individuals who benefit from their recipients' activities. Consequently, the level of benefits to the elderly cannot be estimated with certainty. The States and the Commonwealth of Puerto Rico allocated approximately \$880 million of State CDBG funds to local governments during Fiscal Year 1989. Approximately \$229 million or 26 percent of these funds supported housing-related activities such as the rehabilitation of private properties and weatherization services. Some local governments target some of these activities to benefit elderly homeowners and tenants. Approximately \$42 million or 4.8 percent of State Small Cities CDBG funds assisted public facilities and public services. Some local governments spend a portion of these funds for neighborhood facilities, senior citizen centers, centers for the disabled, and the removal of architectural barriers.

C. RENTAL REHABILITATION PROGRAM

The Rental Rehabilitation program was authorized by Section 17 of the Housing Act of 1937, as amended by the Housing and Urban Rural Recovery Act (HURRA) of 1983, and provides grants to States, cities with populations of 50,000 or more, urban counties, and approved consortia of units of general local government. In Fiscal Year 1990, Congress made \$127.9 million available for Rental Rehabilitation program grants. These grants finance the rehabilitation of privately-owned rental housing in order to help ensure that an adequate supply of standard housing is affordable to lower income tenants. In addition, rental assistance is provided to low-income families and displaced persons to help them afford the increased rent of rehabilitated units or to move to other housing. This assistance is made available through Section 8 Existing Certificates and Housing Vouchers administered locally by Public Housing Agencies.

Although the Rental Rehabilitation program is relatively new, the number of completed units has increased dramatically in the past three years with 43,000 units completed in Fiscal Year 1990. As of September 30, 1990 commitments had been issued for 39,728 projects containing 184,844 units, and all rehabilitation construction work had been completed in 33,865 projects containing 144,631 units. Elderly tenants account for approximately 17,000, or 12 percent of the occupied units in these buildings. The National Affordable Housing Act terminates the Rental Rehabilitation program in fiscal 1992. This activity will be made eligible under the HOME Investment Partnerships block grant established in Title II of the Act.

D. SECTION 312 REHABILITATION PROGRAM

Through the Section 312 Housing Rehabilitation Loan program, HUD makes loans for the rehabilitation of single-family and multifamily, residential, mixed use, and nonresidential properties. These funds are derived from loan repayments, the recovery of prior year commitments, and unobligated balances from prior years. To be eligible for assistance, properties must be located in urban areas designated as eligible for the Community Development Block Grant program or the proposed rehabilitation must be necessary or appropriate for the execution of an approved CDBG program. Communities must also give priority for loans to low- and moderate-income owner occupants whose incomes are at or below 95 percent of the median income for that metropolitan area.

In Fiscal Year 1990, 1,250 Section 312 loans totaling \$40.9 million were made in 162 communities. One thousand two hundred and eight loans were used to rehabilitate single-family (one-to four-units) properties and forty-two loans were made for multifamily and commercial properties. Although comprehensive data on the ages of borrowers are not currently collected, available information suggests that about 22 percent of Section 312 single-family loan recipients were 60 years of age or older.

The National Affordable Housing Act terminates the Section 312 Program in fiscal 1992. This activity will be made eligible under the HOME Investment Partnerships block grant established in Title II of the Act.

E. COMPREHENSIVE HOMELESS ASSISTANCE PLAN

The Stewart B. McKinney Homeless Assistance Act establishes requirements for the Comprehensive Homeless Assistance Plan (CHAP) which governs the provision of assistance under HUD's homeless programs. States, metropolitan cities, urban counties, and territories that are eligible to receive an Emergency Shelter Grant by formula must have an approved CHAP if they wish to apply for funding under the McKinney Act Title IV programs. Each CHAP must include a description of the need for assistance, the services available, and a strategy to match needs with available services, particularly the special needs of families with children, elderly, mentally ill, and veterans. After the CHAP is approved, any application for Title IV assistance must include a certification that the activities proposed for assistance are consistent with the approved plan. On November 28, 1990, the National Affordable Housing Act integrated the CHAP requirements into the new Comprehensive Housing Affordability Strategy (CHAS) that replaces the CHAP.

F. EMERGENCY SHELTER GRANTS PROGRAM

The Emergency Shelter Grants program provides funds to States, cities, urban counties and territories to improve the quality of emergency shelters, make available additional shelters, meet the cost of operating shelters, provide essential social services to homeless individuals, and help prevent homelessness.

In Fiscal Year 1990, Congress made \$73 million in Emergency Shelter program grants available to States, cities, urban counties and territories. HUD allocated approximately \$42 million to 322 Entitlement communities, with individual amounts determined by formula. States distributed approximately \$31 million to cities and counties within their jurisdictions.

As in the CDBG Entitlement program, States and communities are not required to report to HUD the ages of individuals who benefit from their recipients' activities. Consequently, the level of benefits to the elderly cannot be estimated with certainty. However, according to a HUD survey of shelter managers conducted in September 1988, it is estimated that approximately 2 percent of the homeless persons who are occupants of shelters on a typical night are 65 years of age or over.

G. SUPPORTIVE HOUSING DEMONSTRATION PROGRAM

The Supportive Housing Demonstration program has two components, Transitional Housing and Permanent Housing for the Handicapped Homeless. The Transitional Housing program is designed to provide short-term housing and support services that facilitate the transition of homeless persons to independent living. The program aids the acquisition, rehabilitation, or leasing of transitional housing facilities, the payment of operating costs, and supportive services. In Fiscal Year 1989, the Transitional Housing program awarded private non-profit and governmental sponsors \$119.5 million to develop 143 projects.

The Permanent Housing for the Handicapped Homeless Program assists States develop community-based, long-term housing and supportive services for handicapped persons who are homeless or at risk of becoming homeless. In Fiscal Year 1990 HUD awarded \$15.3 million to 104 projects that are developed in partnership with private non-profit organizations.

H. SUPPLEMENTAL ASSISTANCE TO FACILITIES TO AID THE HOMELESS

The Supplemental Assistance to Facilities to Aid the Homeless (SAFAH) program helps communities provide a comprehensive service package that allows the homeless to become economically self-sufficient and return to the community. The program combines housing for the homeless with supportive services and places special emphasis on assisting homeless families with children and elderly persons. In Fiscal Year 1990,

HUD awarded \$10.8 million to 20 shelter organizations for supportive services, counseling, and other assistance to the homeless. Approximately \$1.8 million went to organizations that emphasize care for elderly persons.

IV. POLICY DEVELOPMENT AND RESEARCH

A. AMERICAN HOUSING SURVEY

The 1989 National American Housing Survey, released December 1989, and subsequent biennial national surveys, contain special tabulations on the housing situations of elderly households in the United States. The tabulations are in the same format as those produced in previous years for Blacks and Hispanics, for households in the four census regions, and for central cities, suburbs, and non-metropolitan areas. An elderly household is defined as one where the householder, who may live alone or be the head of a larger household, is aged 65 years or more. The tabulations include information on housing and neighborhood characteristics of the previous housing of recent movers, both owners and renters. Special information is provided on households in physically inadequate housing or with excessive cost burdens, and on households in poverty. Separate data are provided for elderly Black and Hispanic households.

B. RETIREMENT SERVICE CENTER PROGRAM

The Retirement Service Center (ReSC) program was developed by HUD in 1983 under Section 221(d)(4) in response to requests of developers and lenders who expressed their opinions that there was a need for a mortgage insurance program for the development of unsubsidized congregate rental housing for the elderly. These projects were intended to fill a perceived gap in the housing options of the elderly between totally independent living in the community and the health and medical care environments provided in residential care facilities, such as nursing homes.

In response to the growing losses in the Retirement Service Center program, the Secretary on July 6, 1989 placed a moratorium on mortgage insurance for these congregate rental projects. As a result of the losses, concern that ReSCs were serving only the upper income elderly and inquiries on the extent of the problems from the House Select Committee on Aging, PD&R was requested to conduct an evaluation of the ReSC program. PD&R sent its findings to the Secretary on June 26, 1990.

The purpose of the evaluation was three-fold. The first was to evaluate the ReSC program and determine if there was a need for such a mortgage insurance program. The second purpose was to determine if the program could be restructured to be financially viable. The third purpose was to determine if a restructured ReSC program could be targeted to serve primarily the low-to-moderate income elderly.

The study was based on the three different surveys of HUD's 186 ReSC projects, a qualitative analysis of potential demand on a nationwide basis, a review of the literature and recent research findings in the industry, as well as discussions with a variety of experts in the retirement housing industry.

The study found that there is a very limited demand for market rate congregate rental projects because of the high costs of rent and services and the high incomes necessary to afford the shelter and services. The program's experience has shown that these projects served almost exclusively the upper-income elderly. The average total monthly charge for rent and services in a one-bedroom ReSC unit was \$1,200 and tenants typically paid between 50 and 60 percent of their incomes for rent and services. To afford a unit in a ReSC project generally required an annual income of \$20,000 or more. Approximately 90 percent of the tenants are one-person households age 75 or older. Elderly households with the age, household size and income characteristics of the tenants in ReSCs comprise only about 5 percent of the total elderly households, age of head 62 or older, in the United States.

Accordingly, a mortgage insurance program, designed to insure low cost and moderate income housing, evolved into a housing program affordable only to a small population with relatively high incomes.

As a consequence of the very limited market, a large and progressively increasing number of projects have been unable to sustain financial viability. Of the 186 projects insured or coinsured under the program, accounting for \$1.53 billion in mortgage volume, some 53 percent are either in default or experiencing financial or operational difficulties. The study found that up to that point, a total of \$443.1 million was in default or assigned to HUD and another \$363.7 million was classified by the Department as troubled. HUD estimates that the net losses to the insurance fund could total close to \$300 million.

Because the ReSC program consists of market rate projects with no direct Federal rental subsidy or subsidies for the support services, terminating the program would not result in a gap in the types of housing and support service arrangements currently available to serve the lower income elderly. The ReSC projects are quite similar to Section 202 projects providing congregate services. Other alternatives, such as the use of Section 8 certificates or housing vouchers combining housing assistance with support services, as in the Administration's proposed program of HOPE for Elderly Independence, or community based in-home services, can be more cost effective.

V. FAIR HOUSING AND EQUAL OPPORTUNITY

The Fair Housing Amendments Act which was effective March 12, 1989 provides for "housing for older persons" which is exempt from the requirement of nondiscrimination against families with children. Such housing is defined as 1) housing for the elderly provided under any State or Federal program designed and operated for this purpose, 2) housing intended and operated for occupancy by persons 62 or older, 3) housing intended and operated for occupancy by at least one person 55 or older per unit. "Over 55", housing must have significant facilities and services designated to meet the physical or social needs of older persons or show that provision of such facilities and services is impracticable and that such housing is necessary to provide important housing opportunities for older persons.

Fifty percent of the HUD complaints alleging discrimination from March 12, 1989 through December 1989 were based on familial status. Several of these complaints were filed against housing providers who claimed the "housing for older person" exemption. Each of these complaints was investigated and resolved in accordance with the Act.

During 1990, HUD received nine complaints alleging age discrimination in Federally-assisted programs. Five of the nine have been forwarded to the Federal Mediation and Conciliation Service (FMCS) for mediation. Four are now being processed by HUD.

One of the three complaints referred to FMCS in 1989 was successfully settled in 1990 in favor of the complainant. One of the two complaints investigated in 1989 by HUD resulted in a finding of compliance, and the other is still in process.

ITEM 8. DEPARTMENT OF THE INTERIOR

NOVEMBER 30, 1990.

DEAR MR. CHAIRMAN: Secretary Lujan appreciated your letter of September 24, 1990, concerning the annual report on Developments in Aging, 1990. He has asked me to submit the report for the Department of the Interior and to express his appreciation to the Committee for printing the Department's full report in the Senate Special Committee on Aging publication in 1989. It was rewarding that the report was widely distributed, including Congress, governmental agencies, professionals, academics, journalists, and interested persons.

Reports on the Developments in Aging, 1990, were submitted by Interior's bureaus and offices and are presented in Attachments A-M. Summary highlights from their reports are as follows:

The Office of Personnel (Attachment A) reports that the Department employed 336 persons over age 70 representing an increase of 45 employees or 13 percent above the number employed in 1989, 24 employees over age 80 with varied work schedules and occupations, and a breakdown of the number of employees over age 70 by age and bureaus. The Office of Secretary Personnel (Attachment B) states that it serves the needs of the elderly by providing them access to employment opportunities and training and other services, the employment of older persons in a wide variety of occupations, 60 percent of the work force over age 40 resulting in an increase of 4 percent from 1989, 81 employees or 5.8 percent of the work force over age 60 decreasing by 10 employees since 1989, 4 employees over age 70, a wide variety of occupations with older employees providing difficult to replace experience in such fields as administrative and legal, equal opportunity and out-reach efforts to all applicants and employees regardless of age, encouragement of managers and supervisors to fully utilize employees and recognize their contributions with ceremonies, and equal architectural access to Interior buildings for older persons. The Office of Equal Opportunity (Attachment C) submits that various training sessions and technical assistance were provided on age discrimination issues for Department and outside personnel, complaints processed on Federal financial assistance programs, technical assistance, and policy direction on the nondiscrimination requirements of the Age Discrimination Act of 1975, 5,350 on-site civil rights compliance reviews, a national civil rights public notification program using English and Spanish languages, quarterly newsletters and directives on age discrimination policies, production of an audio tape for visually impaired persons, self-evaluation on age discrimination in federally conducted programs, the development of training modules for managers and other persons, and 41 percent or 142 of the 341 formal complaints received with 60 percent successfully resolved.

Also, the National Park Service (Attachment D) reports a systemwide approach for meeting the needs of senior citizens throughout its parks coordinated by a Special Programs and Populations Branch, efforts to increase the number of older citizens in the Volunteer-in-the-Parks Program in cooperation with the American Association of Retired Persons with the number in the program increasing from 4 to 10 percent annually since 1983, the issuance of 369,056 Golden Age Passports as a free and lifetime entrance permit to recreation areas where entrance fees are usually charged and the holder gets a 5 percent discount on fees charged for facilities and services, the modifications of programs and facilities for senior citizens with physical and other impairments, financial assistance to State and local governments for recreation land acquisition and development that assures access for elderly citizens, financial and technical assistance for Comprehensive Outdoor Recreation Plans with special recreation for senior citizens in urban communities, and 1,566 employees over age 60 with a slight decrease since 1989. The Minerals Management (Attachment E) reveals an increase from 55 percent in 1989 to 59 percent in 1990 of employees over age 50 totalling 2,132 employees with 28 employees over age 60 and 9 over age 70, older workers represented in a variety of occupations ranging from computer specialists to physical scientists, an employee development program and retirement planning workshop for aging employees, equal employment opportunity to all employees and applicants, mineral royalty payment to older Americans who often depend heavily on these payments to meet basic human needs, and the offshore mission to increase domestic oil and gas production that has a significant effect on the economic welfare of older Americans. The Office of Territorial and International Affairs (Attachment F) states the employment of 53 percent of its work force over age 40, training programs and other services to keep aging employees up with new technology, the self-governing territorial governments responsible for federally funded programs for the elderly under their jurisdiction, and assistance available to the territories upon request.

Also, the Bureau of Land Management (Attachment G) reports 71 employees over age 65 in its work force, employment and service opportunities for older persons, work environments to encourage aging workers to stay on the job, extensive use of volunteer programs and hosted workers programs for older workers, a wide variety of occupations and programs in many geographical areas, 6.5 percent of 14,296 volunteers over age 60 volunteering an average 54 hours valued at more than \$6.5 million for all of the volunteers, Exemplary Volunteer Service Awards to senior volunteers, meaningful work for elderly persons under the Green Thumb Program, and the hiring of older temporary employees such as 15 employees between the ages of 60-70 at the Oregon State Office. The U.S. Geological Survey (Attachment H) submits sound and effective personnel management practices to assure fair and equitable employment promotion for older persons to maintain experienced and creative scientists and support personnel, detailed demographics on the ages and distribution of workers in the labor force for the present and future that show the importance of older workers, copies of all vacancy announcements sent to the private Senior Employment Resources Agency supported in part by funds from the Older Americans Act, awards and recognition given to a large number of older employees, an impressive profile of a 70-year-old personnel officer with 50 years of Federal service, informational seminars for older employees on retirement preparation, older employees given scientific lectures in local schools and colleges, retired employee organizations that allow retirees to maintain contacts with their professional earth science colleagues, retirees to maintain contacts with their professional earth science colleagues, retiree group newsletters that highlight travel and social activities, a work force that has 6 employees over age 80 and 40 employees over age 70, and a Volunteer for Science Program for older employees and retirees that has been recognized around the world. The Office of Surface Mining (Attachment I) states that 61 percent of its employees are over age 40 and 2 employees are over age 70, the issuance of an equal employment policy statement to all employees that stresses nondiscrimination of older individuals, video tapes on discrimination in the work place used in training sessions for managers and supervisors, the monitoring of upward mobility and awards programs for older employees, employees volunteering to visit and assist senior citizens at nursing centers and rest homes, and mission programs to protect the lives and property of older citizens.

Also, the U.S. Fish and Wildlife Service (Attachment J) reports 53 percent of its work force over age 40 increasing 1 percent from 1989 and 323 employees over age 60, the rehiring of 18 retired annuitants, 61 percent of the field and regional office managers eligible for retirement within 3 years, training for equal opportunity counselors on the age discrimination law, the accessibility of projects and facilities for aging people with disabilities by site surveys and studies, conduct of 53 post-award civil rights complaints reviews for equity to all persons regardless of age, 2,181 senior citizens volunteering 575,695 hours of their time and energy in a diversity of activities, a cooperative agreement with the American Association of Retired Persons to use its data bank of members for volunteer services, unique volunteers working to save the Bald Eagle in the Bald Eagle Nest Watch Program, awarding senior citizens in the Take Pride In America Campaign, profiles of awardees for outstanding volunteer services, and the Golden Age Passport issued to over 38,000 senior citizens to enhance their recreational opportunities on Federal lands. The Bureau of Reclamation (Attachment K) submits a Human Resources Agreement with the U.S. Forest Service consistent with the Older Americans Community Services Employment Act of 1973 to promote part-time work opportunities in community service activities for unemployed low-income persons over age 55, a Host Agency Agreement between Green Thumb administering a Senior Community Service Employment program with a grant from the U.S. Department of Labor, the employment of senior citizens, cost-sharing projects in the Pacific Northwest Region, employment of senior citizens during the summer season at campgrounds in Idaho, re-employed annuitants hired to perform in specialized technical areas, self-evaluations and transition plans to make programs and activities accessible to persons with disabilities for recreation such as boating and fishing, land-use agreements with local governments to develop public land for recreational use by senior citizens, Resource Management Plans for elderly persons to use recreational facilities year-round, senior citizens using recreational facilities under the Golden Age Passport program, the Denver Recreation Employees offering retirees opportunities to participate in civil and recreational activities, a volunteer program that utilizes services from older citizens on public lands and water, pre-retirement seminars for older employees and their spouses, and awards and recognition for aging employees for performance and length of service.

Also, the Bureau of Mines (Attachment L) reports of the value of its experienced employees with technical expertise, the employment of 208 people over age 60 representing 8.9 percent of the work force and an increase over 1989, 78 percent of employees over age 60 in professional positions and 12 percent minorities, hiring authorities to employees, reemployed annuitants and college faculty members, individual retirement counseling for aging employees, periodic information and reminder notices on retirement eligibility, and awards for senior employees. The Bureau of Indian Affairs (attachment M) reports services and financial payments to eligible Indian individuals and families that include the elderly who reside on or near reservations and are not eligible for such assistance from other Federal and State sources, counseling and support services to the elderly upon request or referral from other sources, adult protective services for the safety and health of the elderly, the Adult Custodial Care program provided in localities where public funds are not available, nonmedical care given senior Indians in a least restrictive environment such as at home, and services to elderly Indians with restricted individual Indians monies accounts on financial matters.

It is our pleasure to submit the Developments in Aging, 1990, report with diverse and numerous Interior activities and programs that meet the needs and interests of Interior employees and consumers. The Department places high priority on insuring the rights and desires of aging individuals in its various programs and services. Secretary Lujan fully appreciates the work you and your Special Committee on Aging are doing for our aging citizens, and we will continue to cooperate in every way possible with your Committee. Thank you for the opportunity to submit this report for 1990.

Sincerely,

DR. ANDREW S. ADAMS,
Special Projects Administrator,
Policy, Management and Budget.

Attachments.

ATTACHMENT A

OCTOBER 25, 1990.

Memorandum to: Special Projects Administrator—Policy, Management and Budget.
From: Director of Personnel.
Subject: Report on Developments in Aging—1990.

This is in response to your memorandum of October 1, 1990, requesting information on employees in the Department of the Interior who are 70 years of age and older.

As of September 30, 1990, there were 336 persons 70 years of age and older. This figure represents an increase of 45 employees or a 13 percent increase from our fiscal year 1989 report. Of the 336 employees, 24 were 80 years and older. Work schedules and occupations varied among the employees in the 80-year and older age group. For your submission to the Senate Committee, we have provided a listing by occupation, age, and work schedule of employees in the 80 years and older category.

We have also provided you with the Departmental statistical breakdown of persons 70 years and older.

If you have any questions, please contact Donna Waters-Davis on (202) 208-7764.

1990 REPORT TO THE SENATE COMMITTEE ON AGING

70 Years and Older

Age:	Total No. of employees
70	95
71	49
72	46
73	29
74	22
75	13
76	20
77	12
78	14
79	12
80	6
81	9
82	1

83.....	4
84.....	0
85.....	1
86.....	0
87.....	1
88.....	0
89.....	1
90.....	0
91.....	0
92.....	0
93.....	0
94.....	1
Total.....	¹ 336

¹ 0.4 percent of the total workforce.

As of September 30, 1990. 78,947—total workforce.

OCCUPATIONS AND WORK SCHEDULES OF EMPLOYEES 80 YEARS AND OLDER AS OF SEPTEMBER 30, 1990

Bureau of Land Management: Intermittent Laborer—Age—81

Bureau of Indian Affairs:

Full-time Area Facility Manager—Age—80

Full-time Boiler Plant Operator—Age—80

U.S. Geological Survey:

Part-time Geologist—Age—85

Intermittent Hydrologist—Age—81

Intermittent Hydrologist—Age—83

Intermittent Geologist—Age—81

Intermittent Geologist—Age—94

Intermittent Geologist—Age—89

Intermittent Geologist—Age—83

Bureau of Mines:

Intermittent Physical Scientist—Age—80

Intermittent Physical Scientist—Age—81

Full-time Physical Scientist—Age—80

National Park Service:

Full-time Park Ranger—Age—81

Full-time Rancher Worker—Age—81

Full-time Park Ranger—Age—83

Intermittent Special Assistant to Regional Director—Age—81

Part-time Landscape Architect—Age—82

Part-time Park Ranger (Interpretation)—Age—87

Full-time Laborer—Age—81

Full-time Laborer—Age—81

Fish and Wildlife Service:

Full-time Carpenter—Age—80

Part-time Laborer—Age—82

Part-time Range Aide—Age—80

ATTACHMENT B

OFFICE OF THE SECRETARY

NOVEMBER 5, 1990.

Memorandum to: Special Projects Coordinator, Assistant Secretary—Policy, Management and Budget.

From: Personnel Officer, Office of the Secretary.

Subject: Report on Developments in Aging, 1990.

This is in response to your memorandum of October 16, 1990, regarding the subject program in fiscal year 1990. Although this division does not administer any programs intended exclusively to benefit the aging, our personnel program is committed to serving the needs of the elderly by providing access for elderly citizens to employment opportunities and by providing training and other services to those older employees who wish to remain active in the work place.

We currently employ older persons in a wide variety of occupations. Sixty percent of our work force is over the age of 40, an increase of 4 percent from fiscal year

1989. The number of employees over age 60 remained steady at 5.8 percent of the total work force. Eighty-one employees are over age 60, which is a decrease of 10 since fiscal year 1989. Four employees are over the age of 70, a decrease of one since fiscal year 1989.

Older employees are represented in a wide variety of occupations, particularly administrative and legal and provide a depth of experience that will be difficult to replace if these employees leave the work force. Given the demographic forecast for the next decade, of a decrease in younger employees and an increase in older employees, it is clear that we will place an even greater reliance on our mature work force.

The Office of the Secretary provides equal opportunity to all applicants and employees regardless of age and our outreach efforts include all segments of society and make no restrictions according to age.

We are very much aware of the demographic changes taking place in the work force; the over-40 population in the Department and the country as a whole is growing rapidly. In order to meet our demands for skills we must creatively utilize the resources of the older population. The Office of the Secretary provides equal opportunity to all applicants and employees regardless of age and our outreach efforts include all segments of society and make no restrictions according to age. Managers and supervisors are encouraged to ensure fairness in the treatment of all employees regardless of age and to recognize the contributions of employees who have served the Department for many years by presenting length of service awards at local ceremonies and by supporting the hiring and training of older persons whenever possible.

Our Division of General Services continues to provide equal access to Interior buildings for older persons when entering to inquire about Interior programs or opportunities for employment with the Office of the Secretary.

J. LYNN SMITH.

ATTACHMENT C

NOVEMBER 21, 1990.

Memorandum to: Dr. Andy Adams, Special Projects Administrator—Policy, Management and Budget.

From: Director, Office for Equal Opportunity.

Subject: Report on Developments in Aging, fiscal year 1990.

This is in response to your memorandum of October 1, 1990, requesting the Departmental Office for Equal Opportunity's (OEO) report on Developments in Aging, fiscal year 1990.

During the fiscal year, OEO conducted several instances of training on Interior's various age discrimination policies. The Office held numerous workshops, conferences, and provided technical assistance in addressing important age discrimination issues for State and local governments, bureau-level equal opportunity staffs, and program and personnel components of the Department.

In Interior's Federal financial assistance programs, OEO processed complaints; effectuated complaint investigations and onsite compliance reviews; and provided technical assistance, oversight, and policy direction in furtherance of the nondiscrimination requirements of the Age Discrimination Act of 1975, as amended (P.L. 94-135). During the period, OEO effected over 5,350 onsite civil rights compliance reviews of recipient programs and activities in order to ascertain compliance with the Act and Departmental implementing regulations. Also, 5 of 82 complaints filed with OEO alleged discrimination on the basis of age. It is important to note that several of these complaints alleged discrimination on the basis of both "handicap" and "age."

In fiscal year 1990, OEO instituted a national civil rights public notification program which covered all Federal financial assistance programs of the Department. To this effect, Interior's age discrimination policies were proclaimed in both the English and Spanish languages for the first time. This particular public notification program entailed informing the public and especially actual and potential program beneficiaries of Interior's age discrimination policies and of the procedures for filing complaints. In addition, the Department's age discrimination policies have been proclaimed throughout the Department through OEO's quarterly newsletters and directives.

OEO has successfully promulgated Interior's age discrimination regulations among all applicable bureaus and offices of the Department, and State and local government agencies as well. In the public interest, the regulations have been produced on audio tape for visually impaired persons. OEO also has advanced the con-

duct of rigorous self-evaluations as well as necessary modifications to its own federally conducted programs and activities and those of its recipients to endure nondiscrimination and program accessibility for elderly and handicapped persons.

OEO has increased awareness of management throughout the Department in an effort to eliminate Interior employment policies and practices that discriminate on the basis of age. Consequently, implementation of plans from the Department's bureaus and offices have been monitored and evaluated by OEO. Equal employment training modules have been developed for managers, supervisors, and equal employment counselors covering age discrimination employment concerns.

Relative to Interior's work force, OEO managed a departmentwide program, for resolving equal employment complaints based on age. In fiscal year 1990, the frequency of age discrimination employment complaints declined in comparison to previous years. During the period, 142 of 341 or 41 percent of all formal complaints filed with Interior alleged age discrimination in its employment practices. In turn 90 or 60 percent of these complaints were successfully resolved during the year.

Thank you for affording this Office the opportunity to report on its accomplishments in ensuring nondiscrimination on the basis of age in programs, policies and practices of the Department of the Interior.

CARMEN R. MAYMI.

ATTACHMENT D

NATIONAL PARK SERVICE

NOVEMBER 27, 1990.

Memorandum to: Special Projects Administrator—Policy, Management and Budget
From: Acting Director, National Park Service, David L. Moffitt.
Subject: Report on Developments in Aging, 1990.

The National Park Service (NPS), over the past few years, has made significant efforts to insure that the full range of the visiting public, including senior citizens, can get into our parks and once there, can participate in and receive the benefits of the programs and services provided.

One step taken by NPS to improve accessibility, was to create a special unit in its Washington Office to monitor and coordinate the entire systemwide effort. It was determined by NPS management that we should approach the issue in a comprehensive, organized way rather than on a project-by-project basis. Accordingly, in 1979, the Special Programs and Populations Branch was established and staffed with individuals who have special background and experience in recreation and park programming with special populations. The primary goal of the Branch is to develop and coordinate a systemwide, comprehensive approach to achieve the highest level of accessibility that is feasible while at the same time, assuring consistency with other legal mandates of preservation and protection of the resources that we manage. Since its creation, the Branch has been working with resource persons in each of the regional offices and other NPS units to assess the current level of accessibility of our various parks, identify the barriers to accessibility, develop policies and guidelines regarding appropriate methods and techniques for improving access, and providing technical assistance and in-service training on cost-effective approaches and program implementation. Through these coordinated efforts, NPS has been recognized as a leader in opening opportunities for disabled persons and senior citizens as well.

At the present time, continued efforts are being made to increase the number of older citizens in the Service's Volunteer-in-the-Parks (VIP) Program and we are currently working with the American Association of Retired Persons (AARP) to accomplish that. Since 1983, the number has increased from 4 percent to 10 percent.

Another major effort of NPS, as it relates to senior citizens, is providing Golden Age Passports. This passport is a free, lifetime entrance permit to those recreation areas administered by the Federal Government that charge entrance fees, and is issued to citizens or permanent residents of the United States who are 62 years of age or older. The passport holder also gets a 50-percent discount on Federal use fees charged for facilities and services such as camping, boat launching, and parking. Since 1975, when this program was changed from a 1-year permit to a lifetime permit, the Service has issued approximately 3 million passports. In 1985, we reported that over 300,000 passports were issued by all Federal recreation agencies. In 1986, 205,013 passports were issued, in 1987, 269,064 and in 1988, 434,285 passports were issued. Data for 1989 shows a slight decrease to 369,056 Golden Age Passports issued. Statistical data for 1990 will not be available until early 1991, however, it is anticipated there will be an increase in the number issued.

The National Park System is increasingly becoming more accessible for all citizens including the elderly and other special populations. This is due to our continuing efforts to remove barriers that inhibit special population groups from experiencing and enjoying the national parks. Many senior citizens, who are experiencing the loss of hearing, problems with visual acuity and mobility impairments, benefit from these programs and facility modifications. Large type materials, captioned audiovisual programs, audio messages for the blind, and adaptations for wheelchair users are all modifications from which senior citizens can benefit. In 1986, the Service published the report of the 1982-83 Nationwide Recreation Survey (NRS). This report included a chapter on "Aging and Outdoor Recreation" which was based on a series of questions sponsored by the Administration on Aging and asked of respondents 60 and over. A major user of the NRS data in 1986 was the President's Commission on Americans Outdoors. The commission report, published in July 1987, emphasized the implications of an aging U.S. population and a greater diversity of interest and ability among older Americans for the future of the parks and other recreation resources.

The National Park Service continues to provide financial assistance to State and local governments for recreation land acquisition and development under the Land and Water Conservation Fund (LWCF) program. Under this and other financial assistance programs, the Service encourages and monitors grant recipients to ensure that adequate provisions are in place to ensure access to assisted recreation facilities and services for elderly citizens, in accordance with the Age Discrimination Act of 1975 and Section 504 of the Rehabilitation Act of 1973, as amended.

The Service provides financial and technical assistance to States for Statewide Comprehensive Outdoor Recreation Plans under the LWCF. One of the major objectives of such planning is to identify and address the recreation needs of special populations, including the elderly and people with disabilities. Statewide Comprehensive Outdoor Recreation Plans are critical in that they are the major policy document for implementation of outdoor recreation at the statewide level. In addition, a number of urban communities, also continues with special planning and recreation programming efforts for senior citizens initiated in earlier years with grants from the Urban Park and Recreation Recovery Program.

The NPS continues to monitor and identify the number of employees who are 60 and over. In 1988, the survey indicate a decrease in the number of employees in this age group. However, in 1989 and in 1990, the survey indicated that employees 60 and over are at all levels and showed a slight increase in the total number employed. Currently, a total of 1,566 full-time employees in the Service are in the 60 and over age group. The 1990 data indicates the following: 294 employees are age 60, 228 employees are age 61, 211 employees are age 62, 207 employees are age 63, 132 employees are age 64, 132 employees are age 65, 111 employees are age 66, 71 employees are age 67, 63 employees are age 68, 56 employees are age 69, 30 employees are age 70, 10 employees are age 71, 12 employees are age 72, 8 employees are age 73, and 1 employee is age 74.

The NPS will continue to monitor this situation and will continue efforts to improve services to this age group.

ATTACHMENT E

MINERALS MANAGEMENT SERVICE

OCTOBER 26, 1990.

Memorandum to: Special Projects Administrator—Office of the Assistant Secretary—Policy, Management and Budget.

From: Acting Associate Director for Management and Budget.

Subject: Report on Developments in Aging, 1990.

This is in response to your memorandum of October 1, 1990, requesting our report on Developments in Aging for 1990. The Minerals Management Service (MMS) continues to work to support programs for older Americans. Our work force statistics are as follows:

The MMS work force, age 40 and over, continued to increase during the past year from 55 percent in 1989 to almost 59 percent in 1990 (1,254 of 2,132). Of this total, 112 employees are over 60, an increase of 2 from 1989 with 38 workers over age 65 and 9 over age 70. In 1990 MMS employs 16 workers over age 65 and 9 over age 70.

Older employees are well represented in a variety of occupations within MMS including computer specialists, accountants, auditors, engineers, and physical scientists.

The needs of our older workers are addressed through our employee development program. Retirement planning workshops are regularly attended by eligible MMS employees. Our managers and supervisors continue to receive equal employment opportunity training which includes age discrimination and how to avoid it.

The MMS has implemented and continues to implement effective personnel management policies to ensure that equal opportunity is provided to all employees and applicants, including the aged.

The MMS continues to perform its mission-related functions with diligence and with appreciation of the importance of our actions. A major responsibility impacting on large numbers of citizens is the approval of mineral royalty payments to various landholders, including native American Indians. Included in this group are numerous older Americans who often depend heavily on these payments to meet basic human needs and rely heavily on the ability of the MMS to effectively perform these financial responsibilities. We continue to make improvements in the delivery systems by which these payments are made.

The MMS offshore mission has the ultimate objective of increasing domestic (oil and gas) production through offshore resources, thereby decreasing our dependence on foreign imports. Such activities have significant effect on the economic well-being of all our citizens and especially older Americans.

In summary, the MMS has a strong commitment to all our employees, including older workers. Our older workers are a source of valuable knowledge and experience and a significant factor in the success of the MMS mission.

Thank you for this opportunity to report on our activities involving the aging.

JEAN W. BAINES.

ATTACHMENT F

OFFICE OF THE SECRETARY

OCTOBER 16, 1990.

Memorandum to: Dr. Andy Adams, Special Projects Administrator, PBA.

From: Assistant Secretary—Territorial and International Affairs.

Subject: Report on Developments in Aging, 1990.

This is in response to your memorandum of October 1, 1990, requesting our report on Developments in Aging for 1990. Although the Office of Territorial and International Affairs (OTIA) does not administer special programs for the elderly or any groups of people, there are no restrictions on employment, employee training, special assignments, or promotions.

We currently employ older persons in various occupations; 53 percent of our employees are 40 and above. We encourage workers to participate in training programs and other services to keep them abreast of new technology in the work force. The Office of Territorial and International Affairs has a strong commitment to all our employees, including the older workers.

The territories under the jurisdiction of OTIA are self governing. The territorial governments are responsible for federally funded programs for the elderly under their jurisdiction. OTIA is always available to assist the territories upon request.

Thank you for this opportunity to report on Developments in Aging.

STELLA GUERRA.

ATTACHMENT G

BUREAU OF LAND MANAGEMENT

NOVEMBER 15, 1990.

To: Dr. Andy Adams, Special Projects Administrator, PMB.

From: Chief, Division of Personnel.

Subject: Report on Developments in Aging, 1990.

This responds to your request for a report on the activities of the Bureau of Land Management (BLM) on Developments in Aging.

During 1990, the BLM continued its commitment to serving the needs of the elderly by providing employment and service opportunities for older persons who wish to remain active in the work place. We demonstrated our commitment to retaining our older skilled workers by providing work environments which encourage them to stay on the job. We have also made extensive use of volunteer programs and hosted

worker programs to provide opportunities for older workers who wish to remain active on the job and/or by providing services. We have elderly employees and volunteers in a wide variety of occupations and programs, and in many geographic locations.

BLM recruited a total of 14,296 volunteers for 1990 who contributed 771,048 hours of work (approximately 423 work years). The services these individuals contributed were valued at more than \$6.5 million. Each volunteer worked an average of 54 hours; 6.5 percent of these volunteers were age 60 or older. The following narratives exemplify the extraordinary gift of service the senior volunteers contributed to America's Public Lands. The four individuals cited received BLM's Exemplary Volunteer Service Award.

Albert Baksh has provided extensive graphic support and other contributions of time and talent to the EL Centro Resource Area Office, in BLM's California Desert District. He singlehandedly implemented a new recordkeeping system for over 6,000 sites which has assisted a staff archaeologist with recordkeeping site atlas maintenance and report catalog upkeep. Last year he generously shared his artistic talents with BLM by creating a mural of desert scenery which serves as the cornerstone of an impressive exhibit at the Imperial Sand Dunes Cahulla Ranger Station, an area visited by 750,000 people a year.

Alvan "Al" Kratz has volunteered since 1985 as a campground host at Wiley's Well in Palm Springs/South Coast Resource Area, in BLM's California Desert District. He has donated over 5,000 hours of outstanding service to the thousands of "Snowbirds" that stay at the Wiley's Well Long-Term Visitor Area near Blythe, CA. Most notably, he is responsible for saving the lives of three stranded motorists who were traveling during the summer with temperatures above 115 degrees. His fast thinking and skills are the reasons why these tourists are alive today.

Ernest L. Smith has assisted the Grants Pass Resource Area, Medford District, in Oregon for the past 9 years. He volunteers upwards of 500 hours each year and enthusiastically represents the BLM in his community through his involvement with our miscellaneous forest products programs which include selling firewood, Christmas tree permits, cleaning roadside ditches, and firewood cutting areas. He has also served as a watchman on public lands near his home in Williams, OR, and directed the relocation and construction of the Grayback Mountain hiking and riding trail.

Robert Anderson has served, since retiring in April 1989, as the BLM Utah State Office Volunteer Program Coordinator. He has worked up to 40 hours per week to establish a viable and energetic volunteer program throughout the State. Last year he organized and conducted Utah BLM's first statewide volunteer coordinator's training program, produced their first volunteer use action plan, and compiled their first volunteer handbook. He also developed a State awards program to ensure proper recognition for all volunteers. Due to his efforts, utilization of volunteers increased 24 percent last year.

The BLM has continued to use hosted worker program to provide meaningful work for elderly persons who wish to remain active. The following are some examples of typical assignments BLM has provided under the Green Thumb program.

The BLM Worland District Office in Wyoming used two older workers, one age 61 and the other age 77. One assisted in property inventories, the upkeep of the warehouse, and performed general office maintenance work. The other assisted in receptionist work, answered telephones, sold maps and permits, and provided computer support through data entry and review of outputs.

The BLM Rawlins District Office has a Green Thumb volunteer, age 65, who takes water samples, reads traffic counts, monitors campground use and collects fees at developed recreation sites.

The BLM is very conscious of the contribution that older workers can make to the success of its mission. We have continued to hire older workers for our permanent and temporary workforces. For example, during 1990 BLM's Oregon State Office hired 15 persons between the ages of 60 and 70 as temporary seasonal employees in archaeology, forestry, realty, and recreation programs. BLM California hired a seasonal range technician who is 73 years of age. BLM's Montrose District Office in Colorado hired a maintenance mechanic who is 65 years of age. In addition, in our permanent workforce we have 71 employees age 65 or older; 15 employees age 70 or older; 3 employees age 75 or older; and 1 employee over age 80.

If you have any questions concerning this report, please contact Ed Weathersby on 208-3193.

JOHN G. HOFFA.

ATTACHMENT H
GEOLOGICAL SURVEY

NOVEMBER 14, 1990.

Memorandum to: Dr. Andy Adams, Special Projects Administrator Policy, Management and Budget.

From: Assistant Director for Administration.

Subject: Report on Developments in Aging, 1990.

The Geological Survey is pleased to provide the information you requested on October 1, 1990, for inclusion in the 1990 *Developments in Aging* annual report to the Senate Special Committee on Aging. The Survey has a traditionally strong and continuing commitment to fully utilizing the knowledge and expertise of all our older employees. Described below is a comprehensive annual review and report on our bureau's major activities and programs relative to employment of older Americans.

1. EMPLOYMENT POLICY

Because of the continuing demand for scientific excellence in the Survey's operating programs, there is a strong need for the appointment and retention of experienced and creative scientists and support personnel. The Survey continues to promote the use of sound and effective personnel management practices to assure fair and equitable employment and promotion consideration for older persons.

In all of our employment programs, the Survey stresses equality for both applicants and employees. Vacancy announcements are regularly open to all qualified individuals, regardless of age. The Survey employs older persons in a broad spectrum of scientific, technical, and administrative occupations, and regularly utilizes reemployed annuitants to fill ongoing staffing needs in many bureau program areas. The Survey, as an earth science research organization, is acutely aware of the advanced level of skills and expertise which older employees can impart to other workers and strives to utilize them regularly.

2. OLDER WORKER DEMOGRAPHICS

No report on behalf of older Americans would be complete without information pertaining to demographics. In the face of statistics indicating that 44 percent fewer people between the ages of 18 and 25 will enter the work force in 1990, as compared with 1979, America is slowly rediscovering older workers.

Besides offering employers considerable work experience and skill, older workers fit the flexibility needs of many employers, including the Federal Government. They usually do not want to work full-time and they are frequently available for seasonal jobs or special projects. In addition, the fastest growing age group in the next decade will be Americans between the ages of 45 and 64. Meanwhile, the number of citizens between the ages of 15 and 34 will decrease, meaning fewer young workers to fill entry-level jobs. Some are even beginning to call older workers the next "new hiring frontier."

A new Louis Harris & Associates study shows that there are 1.9 million workers between the ages of 50 and 65 who are able and available to return to the work force. According to the American Society on Aging, this older, loyal, pool of workers will provide a more stable and reliable labor force than younger employees. In the Washington metropolitan area there are more than 550,000 residents over age 55, with seniors accounting for 1 in 5 of the area's adult population. Thirty-three percent of these older residents live in the Northern Virginia counties surrounding the Geological Survey's headquarters in Reston, VA. A study of the income levels, educational attainment, employment and housing patterns of these older citizens indicates that they are better-educated and have higher incomes than older groups nationally. This is a valuable human resource on which the Survey draws for employees.

Since 1900, the number of Americans over age 65 has grown from 3 million to 27 million. Then, the ratio of Americans over 65 was 1 to 25; now in this age group it has become 1 to 9. The substantial elimination of death by disease, and other dramatic improvements in health care for our citizens, means that most Americans live much longer now. The average life expectancy has increased in this century from 49 to 73 years. In addition, at the present time, the fastest growing segment of America's population, according to George Washington University, is the 85-and-over age group, and their mortality rate is *decreasing* 2 percent a year. About 3 million Americans were 85 years of age or older in 1989, according to the Census Bureau,

up from 2.3 million in 1980. Also, in 1980, about 15,000 people in America were 100 years of age or older. By 1989, this figure increased to 65,000.

A survey of employers, funded by the American Association of Retired People, has revealed several strong points typical of older workers: good attendance patterns and punctuality; a strong commitment to doing quality work; reliable performance records, and loyalty and dedication to their company. As employers in both the public and private sectors increase their recognition of the positive contributions that older workers can make, and as the demographics of the American population change, there will be a greater need for older workers to be hired and greater pressure to change employment policies to accommodate them.

3. SENIOR EMPLOYMENT RESOURCES

One of the ways the Survey is tapping this valuable human resource is by providing copies of all our vacancy announcements to Senior Employment Resources, a nonprofit private agency, supported in part by funds available under Title III of the Older Americans Act, as well as by other funding from Federal, State, and local governments. This enables our bureau to have access to a local talent bank of individuals 55 years of age or older, who may be seeking full- or part-time employment with a Federal agency.

4. AWARDS AND RECOGNITION

The Geological Survey has no specific programs directed exclusively toward the aging. Instead, we prefer to accept the impact of aging by directing our efforts toward the recognition and utilization of the talents of our older workers. Appropriate annual ceremonies are held to honor the meritorious service and special achievements of all our employees, and to provide suitable awards for length of service. Much of this effort to recognize employees and their contributions to the Survey involves older employees. Within the past year, the following awards have involved large numbers of older employees: 2 departmental public service awards; 4 bureau public service awards; 3 distinguished service awards; 4 bureau public service awards; 3 service awards; a single 50-year service award; 38 awards for 40 years of service; and 141 awards for 30 years of service. These awards demonstrate the Survey's dependence upon the skills and abilities of its older employees, and shows the willingness of these employees to remain in a working environment that continues to allow them to make positive contributions to the bureau's programs. Such achievements are a personal measure of the productive careers which of many of our older employees have enjoyed.

5. OLDER EMPLOYEE CONTRIBUTIONS

Among our many remarkable older employees is our current bureau Personnel Officer, Mrs. Maxine C. Millard. In August 1990, Maxine achieved an important double milestone for career Federal employees: she completed 50 years of very successful Federal service at age 70. Maxine began her Federal career in August 1940, and almost immediately began receiving formal commendations for her "efficient, effective, and cooperative" personnel service. Through the years, Maxine has been formally recognized by every agency with which she has been associated for her "superior personnel assistance" and her "excellent judgment and sound management advice." Early in her career, in 1960, following a personnel management review by the former U.S. Civil Service Commission (now the Office of Personnel Management), she was officially commended by the Commission for her "outstanding service" and the "consistently outstanding achievements of her personnel program." Such recognition by the Civil Service Commission was highly unusual and rare, but was indicative of the depth, scope, and quality of the personnel programs she has managed over the years. Her competence and dedication, her dynamic leadership skills, and her exceptional and technical abilities continue to provide the Survey's managers with personnel assistance of the highest quality. Maxine personifies the distinguished contributions that our bureau's older employees provide.

An outstanding example of the contributions of one of our active retirees is Mr. Clyde Wahrhaftig, who has retired, but who, at age 70, continues a long and distinguished career as a renowned geologist in both academia and Government. As a Scientist Emeritus, Clyde remains active in our Western Region Center in Menlo Park, CA. Besides continuing work on scientific maps and publications on the geology of rugged areas in the Sierra Nevada Mountains, Clyde volunteers to give talks to the general public and to school groups. He actively participated in the celebration of Yosemite National Park's 100th anniversary, leading a geologic field trip for sympo-

sium registrants at Yosemite Valley and addressing visitors on the subject of the glacial history of the Park.

At age 74, Mr. Robert E. Wallace, another valuable older employee, continues his career as an internationally known expert on earthquakes and tectonic activity. Frequently called on to serve in a technical advisory capacity by the Government and by other organizations, Robert has also proven so adept at explaining complex scientific issues and events to nonscientists that he often serves as spokesperson for the Survey to the media and public groups, particularly after a major natural event such as a serious earthquake.

Finally, in an attempt to utilize the expertise and dedicated service of another of our older employees, the Survey arranged for Mr. Richard Hoggatt to return part-time as a reemployed annuitant to continue his important contributions to the ongoing project of verification and computation of water resource records in Indiana. This arrangement proved to be highly beneficial to our Indian Water Resources District, and it allowed Richard to continue to make important contributions as a retiree.

6. RETIREMENT

Because of the large number of older employees in the Survey's work force, our bureau regularly provides informational seminars on preparation for retirement. These pre-retirement programs provide assistance and valuable information to our employees and allows them to successfully make the transition from a full-time, active work status to an effective retirement lifestyle.

Retirees are also valuable to the Survey for the good they create and because they serve as collective scientific resources for use by American society in general and the larger scientific community, as well as the bureau. Many of our retirees make themselves available to serve as lecturers in local schools and colleges. Some of our retirees return to serve as docents at the Survey's National Center to work as guides for visitors. Knowing the bureau the way they do, they add special insights to the tours they conduct. During the Survey's 111th birthday celebration in March of this year, a large group of these retiree volunteers received official "Volunteer for Science" recognition awards for their invaluable assistance.

7. RETIRED EMPLOYEE ORGANIZATIONS

The Survey has several informal, unofficial retired employee organizations, which have proven to be a strong and positive manifestation of the interest of our retirees toward the bureau. Sponsored by our operating divisions, the activities these groups initiate allow our retirees to maintain contacts with their professional colleagues and to continue to support earth science activities of mutual interest. Many of our retirees continue their individual scientific research projects, and are often called upon to share their findings with the larger scientific community. Group newsletters highlight travel activities and the many social gatherings our retirees participate in, and secure as valuable points of contact to keep retirees informed of professional opportunities. The influence of these publications, which circulate in large numbers, is difficult to measure, but we know it is far reaching.

8. REEMPLOYED ANNUITANTS

An analysis of the Survey's work force, by age, reveals the following data: there are 6 employees who are 80 years of age or older; 40 employees are 70 years of age or older; out of a total of 10,494 employees, 5,161 are between the ages of 41 to 69, and we currently reemploy a total of 143 annuitants who are 55 years of age and older. These statistics clearly confirm that the Survey's work force demographics reflect the increasing age of the Nation's general population, and that the Survey is committed to full utilization of older workers.

The Survey is particularly proud of its reemployed annuitants. Real strength is derived from using the experience and knowledge of such employees, because their abilities are based upon years of personal research and development of skills. As a research agency, we believe the necessary foundations for a comprehensive and productive study of the Earth's past, combined with a thorough and ongoing search for its present and future critical resources, lies with a successful work force whose careers are in a state of constant growth and maturation. Most of our older employees are working because they have no desire to stop the challenging growth of their career. Concurrently, the Survey provides continuing interest in and support for their scientific endeavors. The expertise which our older workers possess is a valuable fund from which we expect our younger employees to continue to draw personal enrichment for many years.

9. VOLUNTEER PROGRAMS

The Survey's "Volunteer for Science Program" is an active and growing program in which older employees and retirees are having an important impact. Established to allow support from and assistance by the general public for bureau programs and activities around the world, the program is attracting participation by older persons in increasing proportions.

The "Scientists Emeritus Program," an extension of the volunteer program, establishes an alliance with senior retired personnel that permits them to continue to make important professional contributions to the bureau's programs. Currently, there are 95 retirees taking part in our volunteer program, and 52 scientists emeriti provide their services in that program.

The Geological Survey continues to be proud of all its older employees, and considers those of a more mature age to be particularly valuable to the success of its mission. Because of the quality of their abilities and the depth of their scientific achievements, the Survey will continue to rely upon its older employees, retirees and volunteers, to apply their knowledge and skills to help meet the bureau's technical and scientific responsibilities.

In summary, it is the official policy of the Geological Survey to view the contributions of older persons as a positive and very valuable resource to be depended upon and used effectively to advance America's knowledge of the earth sciences.

WILLIAM F. GOSSMAN
(For JACK J. STASSI).

ATTACHMENT I

OFFICE OF SURFACE MINING

NOVEMBER 24, 1990.

Memorandum to: Dr. Andy Adams, Special Projects Administrator—Office of the Assistant Secretary—Policy, Management and Budget.
From: Director, Office of Surface Mining Reclamation and Enforcement.
Subject: Report on Developments in Aging, 1990.

In response to your memorandum of October 1, 1990, the Office of Surface Mining Reclamation and Enforcement (OSM) is pleased to submit its Annual Report on Developments in Aging for 1990.

OSM relies heavily on the 61 percent of our employees who are 40 years of age or older. These employees account for 636 of our 1,041 total employees and include many of our executives and senior-level managers. Two of our OSM employees are over the age of 70. Given the demographic forecast for the next decade, of a decrease in younger employees and an increase in older employees, it is clear that we will place an even greater reliance on our more mature employees.

As part of OSM's initiative to utilize, develop, and recognize its older employees, several efforts have been implemented. A general Equal Employment policy statement has been issued to all OSM employees, which addressed among other areas, nondiscrimination of older individuals. Additionally, videotapes on subjects such as the prevention of age discrimination in the workplace were used in EEO training sessions for OSM managers and supervisors. Furthermore, "age-neutral" policies and practices are emphasized in supervisory training and monitored with regard to employee participation in the Upward Mobility Program, all training programs, employee promotions, and the awards programs.

Several OSM employees have volunteered for visiting/assisting senior citizens at nursing centers and rest homes. A Center for Occupational Programs for Employees seminar entitled "Caring for Elders—Locally and Long Distance" is being considered for OSM employees. Finally, the various programs of OSM, to protect lives and property, provide considerable aid to our older citizens.

If you have any questions or need additional information, please call Ann L. Chapman, Personnel Officer on 208-2965.

ATTACHMENT J

FISH AND WILDLIFE SERVICE

NOVEMBER 19, 1990.

Memorandum to: Dr. Andy Adams, Special Projects Administrator, Policy, Budget and Administration.
From: Deputy Director, Office of Fish and Wildlife Service.
Subject: Report on Developments in Aging, 1990.

Attached is the Fish and Wildlife Service (Service) 1990 Report to the Senate Special Committee on Aging, in response to the request of October 10, 1990. The Service recognizes its responsibility for providing opportunities to all citizens throughout its system and strives to ensure that senior citizens are utilized and supported through special programs, volunteerism, employment opportunities and the modification of facilities to improve accessibility.

BRUCE BLANCHARD.

We currently employ older persons in a wide variety of occupations. Fifty-three percent of our workforce is age 40 and above. This is a 1 percent increase for fiscal year 1989. The Service employs 7,883 persons, and of that number, 323 employees are age 60 and above (this includes senior level managers). In addition, the Service has also rehired 18 retired annuitants primarily to serve in full-time or intermittent positions in the following occupational categories: 8 professional, 7 administrative, 2 technical, and 1 wage grade.

As a result of a recent analysis of the Service's fishery project leaders, it was determined that 61 percent of the field and regional office manager level personnel are or will be eligible for retirement within the next 3 years. Given the demographic forecast for the next few years indicating a decrease in younger employees and an increase in older employees, it is clear that we will place an even greater reliance on our older employees.

The Service's Office for Human Resources has provided training to Bureau Equal Employment Opportunity (EEO) Counselors on the requirement of the age discrimination law. This training enhances their skills by enabling them to informally resolve complaints and sensitizing them to the needs of our older employees.

During fiscal year 1990, the Service issued 19 EEO Special Achievement Awards and the Director Award to Service employees. Awards were presented at a special ceremony where recognition was given for their outstanding performance and length of service.

The Service has increased its efforts in ensuring that projects and facilities are accessible to the disabled. Since a sizeable percentage of the aging population experiences some degree of disability, the Service continues to modify its facilities in order to accommodate the elderly and disabled. Further, we have senior citizen activists who assist the Service in evaluating sites, programs and activities in relation to accessibility to the disabled. These activists have recommended modifications, improvements and monitoring techniques. Others have served in the capacity of advisors and assistants to managers. Further, they were instrumental in the successful development of several studies conducted on Service lands.

To date, the Service has conducted a total of 53 post-award civil rights compliance reviews. During the course of these compliance reviews, State (recipients) service delivery practices, among other concerns, were reviewed to determine whether they were being provided equitably to all persons regardless of age. The Service has set forth in writing our findings of facts, and recommendations were provided to recipients. At this current time, the Service is assessing all compliance review reports in accordance with regulatory requirements.

Our Volunteer Program is a valuable asset to us in the preservation and conservation of the fish and wildlife activities. So much so that the number of volunteers grew as well as the hours. During fiscal year 1990, 9,036 volunteers (note: 2,181 were senior citizens) donated 575,695 hours of their time and energy to the Service. These active participants were from all walks of life; some chose to volunteer in their own area of expertise; others chose to branch off and work in entirely new areas. The diversity of activities that they were involved in were endless i.e., biological studies, wildlife census, educational workshops and programs, recycling materials, building and mechanical repairs.

The Service has entered into a cooperative agreement with the American Association of Retired Persons (AARP). Through this agreement, the Service will be able to use AARP's data bank of members who are interested in volunteering in diverse activities. It is our goal to promote and enhance opportunities for their members to become more fully involved in the Service's Volunteer Program.

Another volunteer program administered by the Service is the Bald Eagle Nest Watch Program. The goal of this program is to provide avenues in which to protect and conserve bald eagles. Approximately 5 to 10 volunteers are assigned to various refuges where the bald eagle resides. To this end, the Bald Eagle Nest Watch Program has recruited participants from throughout the world to participate in the nesting season from January to July. These unique volunteers are given a small daily stipend to cover equipment, travel and food expenses, but otherwise volunteer their own time from dawn-to-dusk in isolated areas.

The Take Pride In America Campaign, now in its fifth year, has been extremely successful toward enhancing public awareness and community action in regard to our natural resources. Many senior individuals were honored as 1990 winners of the Take Pride in America Awards. For example, Harold Wiedemann, retired engineer, has personally contributed over 2,000 hours of volunteer service. Mr. Wiedemann and the Loxahatchee Natural History Association pledged \$10,000 to the Service's Challenge Grant Program to be used for cleaning our public lands.

Frank Bauman, 76 years of age, and the McLean Refuge Sportsman group wanted improvements done on Service lands. This organization, utilizing Service supplies, repaired a dam and plowed 6 acres of land. This organization has committed itself for the next 5 years in the preservation of our Federal lands.

Howard Byham, retired postmaster, is an excellent example of the assistance obtained through senior citizen volunteers. Mr. Byham has been responsible for the Bluebird Box Program at Erie National Wildlife Refuge for several years. This program is designed to help restore and preserve the bluebird which has been declining in numbers in the Northeast Region of the country. Mr. Byham has designed and constructed many bird houses. Because of the magnitude of the program, the Youth Conservation Corps has provided additional hands to help maintain these nesting houses. On October 22, 1990, Howard Byham was presented the Theodore Roosevelt Conservation Award by President Bush for his exemplary participation.

George Sprague, a full-time volunteer-naturalist at Sachuest-Point National Wildlife Refuge Rhode Island, has provided educational services on the subjects of conservation and natural resources preservation by collecting biological data and maintenance of facility and grounds.

The Service's Natural Fish Hatchery System encompasses volunteer programs that provide opportunities for residents of retirement communities to participate and experience the joy of working with natural resources. For example, Norfolk National Fish Hatchery consists of retired volunteers who have been active for the past 11 years. These volunteers play an integral role in developing, staffing, and maintaining the hatchery's disabled fishing programs. They assist the hatchery staff in loading and stocking fish, maintaining the facility and providing visitor services.

Another major effort of the Service relative to senior citizens is the operation of the Golden Age Passport. Over 38,000 Golden Age Passports were issued in fiscal year 1989 to enhance opportunities for the elderly to participate in recreational activities on Service lands and other Federal lands. Statistical data for fiscal year 1990 will not be available until early 1991, however, based upon past issuances, it is anticipated that there will be an increase in the number of Passports issued.

We appreciate the opportunity to share with you accomplishments on behalf of our older employees and constituents. The U.S. Fish and Wildlife Service will continue to provide diverse wildlife activities that address the needs and interests of all Service employees and consumers.

ATTACHMENT K

BUREAU OF RECLAMATION

NOVEMBER 19, 1990.

Memorandum to: Assistant Secretary—Policy, Management and Budget, Washington, DC Attention: Dr. Andy Adams, (4340-MIB).

From: Chief, Personnel Management Division.

Subject: Report on Developments in Aging, 1990 (Your Memorandum Dated October 1, 1990) (Personnel Management Report).

This is in response to your memorandum of October 1, 1990, subject as above, requesting information on activities affecting the aging. The following activities were undertaken by the Bureau of Reclamation (Reclamation) which benefit older individuals:

EMPLOYMENT OPPORTUNITIES

Our Upper Colorado (UC) Regional Office, Weber Basin Job Corps Civilian Conservation Center (Weber Basin), Ogden, UT, continues to have an established Human Resources Agreement with the U.S. Department of Agriculture, Forest Service, consistent with Title V of the Older American Community Service Employment Act of 1973. The purpose of this agreement is to foster and promote useful part-time work opportunities in community service activities for unemployed low-income persons who are 55 years of age or older. Two individuals continued to be employed during 1990, at Weber Basin under this agreement; one individual is employed as a maintenance worker and the other in a clerical position. An established Host Agency

Agreement between Green Thumb, Inc., and our Collbran Job Corps Civilian Conservation Center (Center), Collbran, CO, continues to be utilized to employ older Americans at the Center. Green Thumb, Inc., administers a Senior Community Service Employment Program by virtue of a grant with the U.S. Department of Labor. Four individuals were employed during the past fiscal year at the Center; one of the individuals employed was a new appointment in 1990. Of the three individuals continuing to work, two are employed as clerical workers and the third is employed as a maintenance worker.

The Pacific Northwest Region (PN) at Boise, ID, reports progress at the Walcott Centennial Park Project (WCP). The WCP is a major cost sharing effort between the Rupert community and Reclamation. WCP has employed many senior citizens in the organization and completion of cost sharing projects throughout the year. The senior citizens provided a considerable work force for constructing a new group picnic shelter in the park. They were also a major contributor of staff (over 45 individuals) for the planting of 200 8- to 10-foot trees in the park and put together a team to complete the testing of an archaeological site found within the park. Another significant contribution to the project was the hiring of a retired engineer to coordinate all the cost-sharing activities for the park, relying on his expertise and knowledge to build the park road system, using retirees and other volunteers to complete the work. The experience with those individuals, with respect to skills, knowledge and an understanding of the work, has been worthwhile for Reclamation. The experience has been so worthwhile that in fiscal year 1991 and beyond, plans are being made to utilize the skills of these individuals on a volunteer basis in established programs.

Reclamation's Central Snake Project, at the PN Region, Boise, ID, employed the Campground Host Program utilizing senior citizens to serve as hosts for developed campgrounds within the project. This program has been an exceptionally positive program for our agency because the individuals are hired for a summer season to serve as greeters, overseers, and general caretakers of our campgrounds on Cascade Reservoir. The program has reduced vandalism significantly and has established a positive presence in our parks.

The UC Regional Office employs older Americans in a variety of professional, administrative, technical, and clerical positions. During the past fiscal year, they have employed seven reemployed annuitants; five of these individuals were given new appointments during fiscal year 1990.

The Great Plains (GP) Region, Billings, MT, reports that they have employed 14 reemployed annuitants of which 4 were still on the rolls at the end of the fiscal year.

Our Denver Office (DO) and our other regional offices also report that reemployed annuitants are hired to perform special projects or provide assistance in specialized technical areas of work. These annuitants are able to offer invaluable experience and expertise in these specialized assignments.

HANDICAPPED ACCESS

Under Section 504 of the Rehabilitation Act of 1973 (Public Law 93-122) as amended in 1978, progress continued in making Reclamation programs and activities available to the public accessible to disabled persons. During previous fiscal years, self-evaluations and transition plans have been completed by our regional offices.

During 1990, the UC Region entered the implementation phase for Section 504 activities which will include retrofitting of restrooms, buildings, displays, tour routes, and campgrounds. Since many of the aging population experience some degree of disability, these modifications will make the UC Region facilities more usable for older Americans.

The PN Region has made many modifications to its structures and facilities throughout the Region, accommodating the needs and requirements of the aging.

Positive changes have occurred at the Central Snake and Minidoka Project Offices with the addition of access ramps and hand rails, making access to the offices much easier for the elderly. Many other positive access changes (too numerous to list) have been made including modifications to boat docking systems, fishing docks, restrooms, signs, and captioning of videos to accommodate the access needs of the elderly throughout the Region. These changes have made our Region's facilities accessible to a larger segment of the population including the elderly.

At the Lower Colorado (LC) Region, additional ramps have been installed in buildings where they are needed to provide access for wheelchairs as well as easier walking access.

Recreation facilities, such as, the New Waddell Overlook at the New Waddell Dam in Phoenix, AZ, are designed with handicapped access (ramps and elevators). A Handicapped Accessibility Committee is being formed with various types of physically handicapped persons who will go on-site to assess the accommodations made, and will provide advice on improvements to the designs of facilities. This may include the installing of special equipment for individuals with poor sight and hearing. In addition, at the park located at New Waddell Dam, entrance fees are reduced for individuals who are 62 years of age and older.

RECREATION

Reclamation owns land along the Central Arizona Project Canal and allows cities to develop the land for recreation purposes under land-use agreements. Under one such agreement with the city of Scottsdale, two public golf courses were developed. The city of Scottsdale has special programs for senior citizens on both of these golf courses. At the Yuma Project Office, Yuma, AZ, who are noted for their frequent special tours conducted at the Yuma Desalting Plant, continued operation and expect their share of "winter visitors".

The PN Region has identified special needs with aging population user groups that can be addressed through the Resources Management Plan process. Examples are yearround use of recreation facilities, accommodating retired individuals' abilities to use recreation facilities in the "off" season. Also, some aging individuals are unable to access receding reservoir shorelines for bank fishing as water levels drop. These and other needs of the aging are being addressed in our Resource Management Plans. Other actions taken include: The interpretive brochures and signs PN developed are designed to be readable by individuals with vision impairments, this often includes aging individuals; the information the PN Region gathers as part of the recreation use observation program collects data on the number of Golden Age Passports used at our sights. (This tells us the ratio of Golden Age Passport users vs. other visitors at Reclamation sites.)

The Denver Reclamation Employees Association continues to offer retirees opportunities to participate in civic and recreational activities, discounted ticket admission, and participation fees. Efforts are reported by other regional offices with regard to enhancing recreational opportunities at many reservoirs and recreational areas which have traditionally attracted many senior citizens and retired individuals.

VOLUNTEERS

Reclamation's Volunteer Program under the Energy and Water Development Appropriations Act (Public Law 101-1010) is being utilized to enhance opportunities for older citizens. Our UC Region reports appointment of one older American as a volunteer at our Colorado River Storage Project, Flaming Gorge Dam, Dutch John, UT. This retired citizen performed work in the warehouse issuing supplies and making signs which were utilized on visitor tour routes. Many favorable comments were received about the improved appearance and operations of the warehouse as a result of the work of this volunteer; the accomplishments of this volunteer were recognized by presentation of a certificate of appreciation in September 1990.

The PN Region, Columbia Basin Civilian Conservation Center (Center) at Moses Lake, WA, has a number of senior and retired citizens involved in its Community Relations Council. The Center has contracted Community and Senior Citizens groups to provide volunteers for various Job Corps projects.

The Marsing Civilian Conservation Center, Marsing, ID, is currently participating in a work program through the Forest Service which provides minimum wage and benefits to citizens age 55 and older who meet certain income criteria. Participants in the program work on a part-time basis.

The GP Region has made contact with the Retired Senior Volunteer Program coordinator, to seek assistance in recruitment of senior volunteers in areas of special need and interest where their services are warranted.

SEMINARS/INFORMATION

Our regional offices conduct pre-retirement for their older employees and spouses. This includes benefits, such as, health and life insurance, Thrift Savings, retirement plans, as well as, aspect of financial management. The Centerline, a monthly newsletter, is mailed from the Denver Office to retirees. The newsletter contains information on Reclamation, current and past employees, and is given a very high grade by retirees as a way to keep in touch.

AWARDS/RECOGNITION

Awards for distinguished service, superior service, and length of service are presented to older workers at ceremonies befitting the occasion. The UC Region presented a Citizens Award to a senior citizen for outstanding contributions to the Reclamation program during 1990.

ATTACHMENT L

BUREAU OF MINES

NOVEMBER 21, 1990.

Memorandum to: Andy Adams, Special Projects Administrator, Office of the Assistant Secretary—Policy, Management and Budget.

From: Director, Bureau of Mines.

Subject: Report on Developments in Aging, 1990.

As a scientific organization, the Bureau values the technical expertise that is representative of a person who has long and extensive experience in research, analysis, development, and assessment activities. We continue to rely on the expertise of senior individuals for our highly specialized technical and scientific positions. To reflect our continued support of utilizing the expertise of senior individuals, the following is provided:

1. The Bureau currently employs 208 employees age 60 and over. This equates to 8.9 percent of the Bureau's workforce and an increase over last year's total;
2. Seventy-eight percent of those employees age 60 and over are in professional positions; and
3. Twelve percent of those employees age 60 and over are minorities.

The increase of employees age 60 and over was primarily due to a large number of employees reaching their 60th birthday and through hiring authorities utilized to employ reemployed annuitants, members of the Secretary's Advisory Committee, and college/university faculty. The servicing personnel offices provided individual retirement counseling and issued periodic information and reminder notices regarding pre-retirement seminars to Bureau employees who were either undecided about retirement or would be eligible for retirement within a specific number of years. During 1990, the Bureau awarded one employee a Superior Service Award, and two senior employees Meritorious Awards.

A review of our internal and external employment policies indicates that the Bureau of Mines has and continues to support the interests and needs of the aging through its diversified programs and service. We continue to stress equal treatment for all applicants and employees.

T.S. ARY,
Director.

ATTACHMENT M

OFFICE OF THE SECRETARY

Memorandum to: Dr. Andy Adams, PBA.

From: Assistant Secretary—Indian Affairs.

Subject: Report on Developments in Aging—1990.

This responds to your request for a report on the activities of the Bureau of Indian Affairs (BIA) on Developments in Aging—1990.

The BIA, Social Services, provides services and financial payments to eligible Indian individuals and families, which includes the elderly, who reside on or near reservations, and who are not eligible for such assistance from any other Federal or State source. Social Services provides counseling and support services to the elderly upon request or referral from other sources. If necessary, adult protective services are provided to ensure the safety and health of the elderly.

Another component of services to the elderly is Adult Custodial Care which is provided in locales where public funds are not available. Custodial care is essentially protective services of nonmedical care to an eligible person when due to age, infirmity, physical or mental impairment the person requires care from others in his or her daily living. The nonmedical care is provided in the least restrictive environment including the individual's home, group home setting or an institution. Social Services also provides services to elderly Indians with restricted Individual Indian Moneys Accounts on budgeting of financial matters and intervenes on behalf of the individual upon request or need.

ITEM 9. DEPARTMENT OF JUSTICE

DECEMBER 19, 1990.

DEAR MR. CHAIRMAN: I am pleased to transmit to you and the Members of the Special Committee on Aging the submission of the Department of Justice for Volume II of *Developments in Aging*. I apologize for any inconvenience our delay in responding may have caused you.

Within the Department, the Office of Justice Programs (OJP) sponsors a number of initiatives that affect older Americans. For example, OJP collects information about the numbers and characteristics of crimes committed against elderly citizens and sponsors programs to improve the treatment of elderly and other victims of crime and help protect senior citizens and their neighborhoods from crime and violence through crime and drug abuse prevention and control programs. In addition, the Office of Justice Programs provides grant funds to the States that may be used to support State and local criminal justice programs that serve older Americans.

Through initiatives such as these, the Department of Justice is working to ensure that our Nation's senior citizens can walk the streets of their communities without fear of crime and violence, and that our criminal justice system affords them the sensitive and equitable treatment they so richly deserve.

I appreciate having the opportunity to share with you and the Committee the significant accomplishments of the Department of Justice, through its Office of Justice Programs, on behalf of older Americans. Please do not hesitate to contact me if I may be of further assistance.

Sincerely,

W. LEE RAWLS,
Assistant Attorney General.

Enclosure.

OFFICE OF JUSTICE PROGRAMS

The Office of Justice Programs (OJP), within the U.S. Department of Justice, sponsors a number of initiatives that affect older Americans. OJP was created in 1984 to provide the Federal leadership and coordination necessary to make the Nation's criminal justice system more efficient and effective. For the past 6 years, OJP has worked to form partnerships among Federal, State, and local government officials to improve the administration of justice in America, combat crime and drug abuse, meet the needs of the innocent victims of crime, and find innovative ways to address such problems as prison crowding, juvenile crime, white-collar crime, and public corruption.

OJP's Bureau of Justice Assistance (BJA) administers the Edward Byrne Memorial State and Local Law Enforcement Assistance Program authorized by the Anti-Drug Abuse Act of 1988. This program provides financial and technical assistance to States and units of local government to control crime and drug abuse and to improve the criminal justice system at the State and local levels. States may use these Federal funds to support a variety of criminal justice programs that affect elderly citizens, including projects to protect senior citizens from physical and mental abuse, prevent consumer fraud directed at them, promote community awareness and crime prevention among the elderly, and provide assistance for elderly victims of crime.

In addition, BJA's national discretionary grant program tests new techniques and provides training and technical assistance in program implementation. One major initiative is the National Citizens' Crime Prevention Campaign, which provides crime prevention and personal safety information to elderly citizens. The Campaign features "McGruff, the Crime Dog," who asks Americans to help "Take A Bite Out of Crime" by taking simple precautions, by reporting suspicious activity to the police, and by working with their neighbors, community leaders, law enforcement officials, and others to keep their communities safe from crime and drugs.

The Campaign is administered through a partnership among OJP/BJA, the National Crime Prevention Council, the Crime Prevention Coalition, and the Advertising Council, Inc. Information packets developed by the Campaign and distributed across the country include special crime prevention tips for senior citizens and focus on the special needs, concerns, and vulnerabilities of elderly citizens with regard to crime and victimization. The Campaign also works to enlist senior citizens in the fight against crime and drugs. Its informational materials and public service advertising encourages older Americans to participate in crime prevention activities in their communities.

In October 1990, under its BJA grant, the National Crime Prevention Council released *Working With Older Americans*, which highlights self-protection methods for seniors, helps raise awareness of society's attitudes toward its elders and their concerns, provides practical guidelines for working with the growing populations of senior citizens, and addresses the complex issue of elder abuse. The report was distributed through the 130 member organizations of the Crime Prevention Coalition and to crime prevention practitioners throughout the country.

OJP's Bureau of Justice Statistics (BJS) collects, analyzes, publishes, and disseminates statistical information on crime, criminal offenders, victims of crime, and the operations of the criminal justice systems at all levels of government. Each year, BJS publishes *Criminal Victimization in the United States*, an analysis of data collected through its National Crime Survey. Data concerning crime victims age 65 and older are presented by race, gender, percentage of crimes committed by strangers against the elderly, perceived age of offenders victimizing the elderly, use of self-protective measures by those 65 and older, extent of injury, medical and hospitalization involving the elderly, and the extent to which the elderly report their victimization to police. In addition, BJS issued a Special Report on *Elderly Victims* in 1987. These studies have shown that while elderly citizens express a greater fear of crime than persons in other age groups, older Americans are actually less likely to be victims of crime.

OJP's National Institute of Justice (NIJ) has found that impressions about crime are related to the content of information about crime. Such information tends to emphasize stories about elderly victims. These stories may influence older citizens to reduce their risk of victimization by constricting their activities to reduce their exposure to danger. This behavior would account, at least in part, for their high levels of fear and low levels of victimization.

NIJ develops and sponsors research on crime and its control to improve Federal, State, and local criminal justice systems and evaluates the effectiveness of criminal justice programs. In conjunction with the American Association of Retired Persons (AARP), NIJ has begun a research project to determine the extent of criminal fraud victimizations, its effects on victims, and how offenders carry out their "scams." The research will help determine whether, as is commonly believed, the elderly are particularly at risk for criminal fraud victimization. In addition, the research will examine various strategies for dealing with criminal fraud.

OJP's Office for Victims of Crime (OVC) serves as the Federal focal point for addressing the needs and improving the treatment of crime victims. This includes administering the two programs—victim compensation and assistance—mandated by the Victims of Crime Act (VOCA) of 1984, as amended, monitoring compliance with the provisions regarding assistance for Federal crime victims as provided for under the Victim and Witness Protection Act of 1982, and implementing the recommendations of the President's Task Force on Victims of Crime, the Attorney General's Task Force on Family Violence, and the President's Child Safety Partnership.

A 1988 amendment to VOCA requires States to set aside 10 percent of the funds awarded by OVC for victim assistance programs for previously underserved victims of violent crime. Twelve States have identified elder abuse victims as a previously underserved group for which they plan to fund additional programs and services. These 12 States are Alabama, Arizona, Connecticut, Georgia, Illinois, Kentucky, Michigan, Missouri, New York, Rhode Island, Tennessee, and West Virginia.

In addition, 12 other States and territories have awarded subgrants from VOCA victim assistance funds to local victim services agencies that aid elderly victims of abuse and crime. These are: Arizona, California, Colorado, Florida, Indiana, Massachusetts, North Dakota, Ohio, Pennsylvania, South Dakota, Wisconsin, and Puerto Rico.

While only 24 of the 57 States and territories participating in the VOCA victim assistance grant program specifically target services for elderly victims of violent crime, services to this vulnerable population of crime victims are also available through some 2,000 victim services programs receiving Federal VOCA victim assistance grant funds.

Under the VOCA victim compensation grant program, elderly victims and survivors of elderly victims of violent crime are eligible to receive reimbursement for expenses related to their victimization. These include medical expenses, including mental health counseling and care, funeral expenses, lost wages, and other costs associated with the crime.

Copies of research and statistical reports and other information published by the Office of Justice Programs is available by calling the National Criminal Justice Reference Service toll-free on 1-800-851-3420. From metropolitan Washington, DC, and Maryland, call 301-252-5500.

Additional information about the Office of Justice Programs is available from the: Office of Congressional and Public Affairs, Office of Justice Programs, 633 Indiana Avenue, NW, Washington, DC 20531. Telephone: 202-307-0781.

ITEM 10. DEPARTMENT OF LABOR

JANUARY 28, 1991.

DEAR MR. CHAIRMAN: Enclosed is a summary of the programs and activities of the Department of Labor for fiscal year 1990 related to aging.

Described in the report are programs administered by the Employment and Training Administration, the Pension and Welfare Benefits Administration, and the Bureau of Labor Statistics.

I trust this information will be of assistance to you in preparing your report, *Developments in Aging*.

Sincerely yours,

RODERICK A. DEARMENT,
Acting Secretary.

Enclosure.

U.S. DEPARTMENT OF LABOR FISCAL YEAR 1990 REPORT ON PROGRAMS AND ACTIVITIES RELATED TO AGING

EMPLOYMENT AND TRAINING ADMINISTRATION

INTRODUCTION

The Department of Labor's Employment and Training Administration (ETA) provided a variety of training, employment, and related services for the Nation's older individuals through the following programs and activities: the Senior Community Service Employment Program (SCSEP); programs authorized under the Job Training Partnership Act (JTPA); the Federal-State Employment Service system; and research and demonstration efforts.

SENIOR COMMUNITY SERVICE EMPLOYMENT PROGRAM

The Senior Community Service Employment Program, authorized by Title V of the Older Americans Act, employs low-income persons age 55 or older in a wide variety of part-time community service activities such as health care, nutrition, home repair, and weatherization programs, and in beautification, fire prevention, conservation, and restoration efforts. Program participants work an average of 20 hours per week in schools, hospitals, parks, community centers, and in other government and private nonprofit facilities. Participants also receive personal and job-related counseling, annual physical examinations, job training, and in many cases referral to regular jobs in the competitive labor market.

More than 80 percent of the participants are age 60 or older, and over half are age 65 or older. Seventy-one percent are female, about half have not completed high school, and all enrollees have a low income.

Table 1 shows SCSEP funding, enrollment and participant characteristics for the program year July 1, 1989, to June 30, 1990.

TABLE 1.—Senior Community Service Employment Program (SCSEP): Funding, enrollment, and participant characteristics—Program Year July 1, 1989, to June 30, 1990

Funding.....	\$343,824,000
Enrollment:	
Authorized positions established.....	65,700
Unsubsidized placement	14,700
Characteristics (Percent):	
Sex:	
Male	29
Female	71
Educational status:	
8th grade and less	26
9th through 11th grade	22
High School graduate or equivalent.....	35
1-3 years of college	12
4 years of college or more	5

Veterans	14
Ethnic Groups:	
White	62
Black	24
Hispanic	9
American Indian/Alaskan Native	2
Asian/Pacific Island	3
Economically disadvantaged	100
Poverty level or less	81
Age group:	
55-59	17
60-64	26
65-69	27
70-74	17
75 and over	13

Source: U.S. Department of Labor, Employment and Training Administration (Preliminary Data).

JOB TRAINING PARTNERSHIP ACT (JTPA) PROGRAM

The Job Training Partnership Act provides job training and related assistance to economically disadvantaged individuals, dislocated workers, and others who face significant employment barriers. The ultimate goal of JTPA is to move program participants into permanent, self-sustaining employment. Under JTPA, Governors have approval authority over locally developed plans and are monitoring local program compliance with the Act. JTPA functions through a public/private partnership which plans and designs training programs, and also delivers training and other services. Private industry councils, in partnership with local governments in each service delivery area, are responsible for providing guidance for and oversight of job training activities in the area.

JTPA places emphasis on increasing the post-program employment and earnings of economically disadvantaged and displaced workers. Seventy percent of the funds available to service delivery areas are required to be spent on training. Not more than 15 percent may be spent for the costs of administration, and not more than 30 percent may be spent for the combined costs of administration and supportive services.

BASIC JTPA GRANTS

Title II-A of JTPA authorizes a wide range of training activities to prepare economically disadvantaged youth and adults for employment. Training services available to eligible older workers through the basic Title II-A grant program include on-the-job training, institutional and classroom training, remedial education and basic skills training, and job search assistance and counseling. Table 2 shows the number of persons 55 years of age and over who terminated from the Title II-A program during the period July 1, 1989, through June 30, 1990. The data do not include the 3 percent set-aside program, which is discussed separately.

TABLE 2.—JTPA ENROLLMENT JULY 1, 1989–JUNE 30, 1990

[Title II-A grants]

Item	Number served	Percent
Total Terminees	645,307	100
55 years and over	11,154	1.7

Source: U.S. Department of Labor, Employment and Training Administration (October 1990 Preliminary Data).

PROGRAMS FOR DISLOCATED WORKERS

Title III of JTPA authorizes a State-administered dislocated worker program which provides training and related employment assistance to workers who have been, or have received notice that they are about to be, laid off; workers who are unlikely to be able to return to their previous industry or occupation; and the long-term unemployed with little prospect for local employment or reemployment. Those older workers eligible for the program may receive such services as job search assistance, retraining, pre-layoff assistance, and relocation assistance. During the

period July 1, 1989, through June 30, 1990, approximately 9,947 individuals 55 years of age and over were enrolled in the program (7.3 percent of the program terminations).

SECTION 124 SET-ASIDE

Section 124 of JTPA calls for 3 percent of the Title II-A allotment of each State to be made available for the training and placement of older individuals in employment opportunities with private business concerns. Only economically disadvantaged individuals who are 55 years of age or older are eligible for services funded from this set-aside.

JTPA offers wide discretion to the Governors in using the set-aside. Two major patterns have evolved. One is its use for organizationally distinct older worker projects in a manner similar to the categorical separation of SCSEP programs from the rest of the JTPA system. The other is the use of the set-aside as resources for Title II-A programs to ensure a minimum portion of older workers among Title II-A participants, without the creation of separate programs for older workers. In some States, all or part of the set-aside is formula-funded to service delivery areas. In other States, it is used for administration at the State level, for model programs, or for both purposes. For program year 1989 (July 1, 1989, through June 30, 1990), preliminary data indicate that the 3 percent set-aside program for economically disadvantaged individuals 55 years of age and over enrolled almost 40,000 participants.

THE FEDERAL-STATE EMPLOYMENT SERVICE SYSTEM

The State-operated public employment service offices offer employment assistance to all jobseekers, including middle-aged and older persons. A full range of basic labor exchange services are provided, including counseling, testing, job development, job search assistance, and job placement. In addition, labor market information and referral to relevant training and employment programs are also made available.

In response to the paperwork reduction initiatives, Federal reporting requirements for the State Employment Service (ES) agencies no longer include data on the characteristics of applicants. Therefore, information is not available at the national level on the number of middle-aged and older persons served by the ES. However, individual ES offices may have such data.

RESEARCH

In fiscal year 1990, the National Institute for Work and Learning published a summary and a two-volume report on the needs and characteristics of union retirees and the services available to them. The report, funded by the Employment and Training Administration and the AFL-CIO, described the results of a 2-year study of over 10,000 retirees.¹

PENSION AND WELFARE BENEFITS ADMINISTRATION

INTRODUCTION

The Pension and Welfare Benefits Administration (PWBA) is responsible for enforcing the Employee Retirement Income Security Act (ERISA). PWBA's primary responsibilities are for the reporting, disclosure, and fiduciary provisions of the law.

Employee benefit plans maintained by employers and/or unions generally must meet certain standards, set forth in ERISA, designed to ensure that employees actually will receive the benefits promised. Employee benefit plans exempt from ERISA include church and government plans.

The requirements of ERISA differ depending on whether the benefit plan is a pension plan or a welfare plan. Both types of plans must comply with provisions governing reporting and disclosure to the Government and to participants (Title I, Part 1) and fiduciary responsibility (Title I, Part 4). Pension plans must comply with additional ERISA standards (contained in both Title I, Parts 2 and 3, and Title II) which govern membership in a plan (participation), nonforfeiture of a participant's right to a benefit (vesting), and financing of benefits offered under the plan (funding). Welfare plans providing medical care must comply with ERISA continuation coverage requirements (Title I, Part 6).

The Departments of Labor and the Treasury have responsibility for administering the provisions of Title I and Title II, respectively, of ERISA. The Pension Benefit

¹ Union Retirees: Enriching Their Lives—Enhancing Their Contribution—Summary Report, Volume 1, Volume 2. National Institute for Work and Learning, January 1990.

Guaranty Corporation (PBGC) is responsible for administering Title IV, which established and insurance program for certain benefits provided by specified ERISA pension plans. PWBA meets and coordinates closely with the Internal Revenue Service (IRS) and PBGC on matters concerning pension issues on a regular basis.

REPORTING AND DISCLOSURE STANDARDS

ERISA requires that plans disclose to participants and report to the Federal Government information about plan provisions and financial status. Each employee benefit plan (unless exempted) must submit an annual report in the form of a financial statement; plans with more than 100 participants must also submit a public accountant's opinion. The annual report generally includes a statement of plan assets and liabilities, a statement of transactions involving conflict of interest situations, and other information regarding the administration of the plan. Annual report forms are simplified for small plans, and a number of paperwork reductions have been instituted since ERISA's passage in 1974.

The annual report is submitted to IRS and shared by the ERISA agencies. To assure the filing of complete and accurate annual reports, a new computerized system of review of these filings has been established. Under the new system the IRS subjects the information supplied on the annual reports to automated edit tests to determine whether all the required information has been supplied. This system gives the Department, for the first time, the capability to systematically identify deficient filings. The information supplied in these reports is used for enforcement and research, and the reports are kept on file for public disclosure. The Pension Protection Act of 1987 amended ERISA to authorize the Labor Department to assess civil penalties of up to \$1,000 per day against plan administrators who refuse or fail to file complete annual reports. The ability to assess a civil penalty for such failures provides the Department with a necessary tool to effectively enforce ERISA's reporting requirements.

ERISA also requires the plan administrator to provide participants, beneficiaries, and the Department with a summary plan description (SPD) written to be understood by the average person. The SPD contains a description of benefits, the requirements for eligibility, and procedures for presenting claims for benefits. In addition, participants may request, and in some cases must be automatically provided with a statement of their individual benefits.

MINIMUM STANDARDS FOR PARTICIPATION AND VESTING

The IRS, for the most part, enforces the ERISA minimum standards for participation and vesting. ERISA restricts the age and service requirements which plans may impose as conditions of eligibility to participate in an employer's pension plan. The basic rule is that an employee cannot be denied membership in the plan merely on account of age or service, if he or she is at least 21 years old and has worked for the employer for 1 year.

Other ERISA provisions govern when a plan participant must gain a nonforfeitable right to the portion of the retirement benefit provided by the employer's contributions to the plan. (Amounts attributable to the participant's own contributions are always nonforfeitable.) In this regard, the plan must provide that an employee gain a nonforfeitable right to this portion of his or her retirement benefit at a rate which is not less generous than one of the schedules set forth in ERISA. The Tax Reform Act of 1986 established new schedules which, for most plans, provide a nonforfeitable right to retirement benefits sooner than under prior law. The new schedules are effective for plan years beginning after 1988.

ERISA also contains rules on the rate at which participants must be allowed to "accrue" a benefit, i.e., the rate at which they are considered to have earned a portion of their ultimate retirement benefit. These standards apply to pension plans which promise to provide participants a defined periodic payment upon retirement.

MINIMUM FUNDING STANDARDS

ERISA sets forth rules for financing pension benefits. For plans which promise participants a defined periodic payment upon retirement, the employer's contribution is determined actuarially. Certain assumptions with respect to mortality, interest, and turnover rates are used to calculate how much should be contributed to provide the benefits promised by the plan. ERISA provides rules governing what types of funding methods are appropriate and establishes penalties for failures to comply with these standards. These funding rules are enforced by the IRS. The Department of Labor, however, has jurisdiction over two new disclosure requirements related to the minimum funding standards under the Pension Protection Act of 1987.

FIDUCIARY STANDARDS

ERISA sets forth certain standards regarding the investment and utilization of plan assets with which fiduciaries of employee benefit plans must comply. These standards include the requirement that plan assets be invested "solely in the interest" of plan participants and beneficiaries, and that plans be maintained for the exclusive benefit of the participants and their beneficiaries. ERISA provides that fiduciaries must adhere to standards, in investing plan assets and in administering the plan, which would be followed by a prudent investor. These standards include a standard relating to diversification of plan assets. ERISA also sets forth certain activities that (unless specifically exempted) may not be carried out by certain individuals and groups (including fiduciaries) who, because of the potential for conflict with the interests of the plan, might cause the plan to operate in their own interest. These activities are known as "prohibited transactions", and persons who violate the rules may be subject to an excise tax imposed by the IRS, or a civil penalty assessed by the Department of Labor.

Civil actions may be brought by the Secretary of Labor or by plan participants and beneficiaries for violations of Title I of ERISA. The Department of Labor places great emphasis on enforcing the fiduciary provisions of the Act. In fiscal year 1990, it recovered over \$139 million for employee benefit plans through a combination of litigation and voluntary compliance. Under voluntary compliance breaches of fiduciary duty are corrected through voluntary settlement agreements with plan officials. PWBA also investigates potential criminal violations involving employee benefit plans. In the past year there has been an increased emphasis on specialized training in criminal investigative techniques to increase PWBA's capabilities in detecting potential criminal violations. Where investigations uncover criminal violations, referrals are made to the Department of Justice for prosecution. The Omnibus Budget Reconciliation Act of 1989 created new mandatory civil penalties that apply to recoveries for violations of ERISA by plan fiduciaries.

PLAN TERMINATION INSURANCE

Title IV of ERISA established within the Department a benefit insurance program administered by the PBGC, a corporation within the Department of Labor with a board of Directors consisting of the Secretaries of Labor, Commerce, and the Treasury. This insurance program is applicable only to certain pension plans which promise a defined benefit upon a participant's retirement. Employers who maintain these plans are required to pay an annual per-participant premium to the PBGC to finance this coverage.

The guarantee program differs according to the number of employers maintaining the plan. In the case of a single-employer plan, the PBGC will guarantee, up to prescribed levels, the payment of a participant's nonforfeitable benefit if the plan terminates with insufficient assets to pay these benefits. In the case of a multiemployer plan, the PBGC guarantees benefits up to a prescribed level which is lower than the level, guaranteed to single-employer plans. In this case, it is the inability of the plan to pay participants their guaranteed amounts, not plan termination, that triggers financial assistance.

RESEARCH AND DEVELOPMENT

PWBA conducts a coordinated program of research through contracts and in-house studies. The research program develops data on employee benefit plans, which can be used as the basis for program modifications or policy decisions. It also analyzes economic issues related to retirement decisions and income and to the performance and effect of private pension plans in financial markets. The following study areas were reviewed in fiscal year 1990:

- (1) Pension portability and labor market efficiency.
- (2) Women and pension portability.
- (3) Analysis of loss to participants through lump-sum pension payouts.
- (4) Costs of mandated health care initiatives.
- (5) Expected health care utilization of the currently uninsured.
- (6) Job transition effect on health care coverage.
- (7) The effect of mandated benefits on the labor market.
- (8) Analysis of trends in administrative expenses of pension plans.
- (9) Study of multiple employer welfare arrangements and multiple employer trusts participation.

INQUIRIES

PWBA publishes literature and audio-visual materials which explain in some depth provisions of ERISA, procedures for plans to ensure compliance with the Act, and the rights and protections afforded participants and beneficiaries under the law. In addition, PWBA maintains a public information and assistance program which responds to many inquiries from older workers and retirees seeking assistance in collecting benefits and obtaining information about ERISA. In fiscal year 1990, the national office staff responded to over 73,000 plan participants, beneficiaries, and other persons interested in the administration of plans and recovered over \$6.7 million for plan participants and beneficiaries. Over 81,145 additional inquiries were handled by PWBA's 15 field offices. Among the publications disseminated, the following are designed exclusively to assist the public in understanding the law and how their pension and health plans operate:

- Health Benefits Under the Consolidated Omnibus Budget Reconciliation Act (COBRA).
- What You Should Know About the Pension And Welfare Law.
- Know Your Pension Plan.
- How To File A Claim For Benefits.
- Often Asked Questions About ERISA.
- How To Obtain Employee Benefit Documents From the Labor Department.
- Simplified Employee Pensions: What Small Business Needs To Know.

BUREAU OF LABOR STATISTICS

The Department of Labor's Bureau of Labor Statistics (BLS) regularly issues a wide variety of statistics on the employment situation by age. Monthly data are available on employment and unemployment for older persons, and annual data are available on consumer expenditures for this group.

ITEM 11. DEPARTMENT OF STATE

JANUARY 17, 1991.

DEAR SENATOR PRYOR: I very much regret the delay in our reply to your letter of September 24, 1990, and in our submission of the Department's portion of your Committee's annual report, *Developments in Aging*.

Enclosed is the Department's contribution to that report. We appreciate the opportunity to have provided input on this topic.

Sincerely,

JANET G. MULLINS,
Assistant Secretary Legislative Affairs.

Enclosure: Report on Developments in Aging.

DEPARTMENT OF STATE REPORT ON DEVELOPMENTS IN AGING FOR 1990

The Department of State's primary involvement with aging citizens is as a provider of U.S. Government services to Americans living overseas. In this capacity, American embassies assist in the distribution of Social Security benefits to recipients living overseas and assist them in other dealings with our Federal Government.

The Department's second point of interaction with the aging is in the context of providing retirement benefits for retirees. The Department of State administers the Foreign Services Retirement and Disability System and the Foreign Service Pension System, which provide annuities and survivor benefits to retired members of the Foreign Service and their families.

The Department keeps in touch with its former employees by such activities as Foreign Service Day, an annual event. This 1-day conference, held at the Department of State, affords Foreign Service retirees an opportunity to refresh their knowledge of foreign affairs, through a series of meetings and speakers on foreign policy topics of the day. Foreign Service Day also gives our former employees a chance to maintain and revitalize personal contacts and friendships acquired during their careers.

ITEM 12. DEPARTMENT OF TRANSPORTATION

DECEMBER 17, 1990.

DEAR SENATOR PRYOR: I am pleased to forward to you the enclosed report which summarizes significant actions taken by this Department during 1990 to improve transportation facilities and services for older Americans. The report is being for-

warded in response to your letter to Secretary Skinner, requesting information for Part 2 of the committee's annual report, *Developments in Aging*. I hope you will find this information helpful.

If we can assist you further, please let us know.

Sincerely,

JEFFREY N. SHANE,

Assistant Secretary for Policy and International Affairs.

Enclosure.

SUMMARY OF ACTIVITIES TO IMPROVE TRANSPORTATION SERVICES FOR THE ELDERLY ¹

The following is a summary of significant actions taken by the U.S. Department of Transportation during calendar year 1990 to improve transportation for elderly persons.²

POLICIES

FEDERAL RAILROAD ADMINISTRATION (FRA)

The National Railroad Passenger Corporation (Amtrak) continued throughout calendar year 1990 its systemwide policy of offering to handicapped and elderly persons a 25-percent discount on one-way ticket purchases, with the exception of certain peak travel days. Senior citizens and handicapped passengers are not permitted to combine their 25 percent discount with any other discounts.

With appropriate prior notification to its reservation office, Amtrak provides special food service, facilities for handling reservations for the hearing impaired, special equipment handling, and provision of wheelchairs and assistance in boarding and debarking of elderly and handicapped passengers. Amtrak operates a Special Services Bureau 7 days a week that assists special needs passengers with tickets and transportation. Persons may request special services by contacting Amtrak's special service desk at 1-800-USA-RAIL. They may also inform the ticket agent of their need at the time they book their reservations or call the railroad station in advance of their travel.

More than 12,000 mobility-impaired and other disabled individuals sought assistance from the Special Services Bureau last year and tens of thousands of other disabled and elderly persons traveled on Amtrak unassisted. Over the past several years, 28 percent of long-distance passengers were 65 and older. Amtrak works each year with a number of organizations on large special moves of disabled and elderly tour group passengers.

Amtrak has modified its older coaches and sleeping cars and has incorporated accessibility features in restrooms and in other areas. Virtually every car can accommodate one electric wheelchair, and Amtrak offers handicapped sleeping accommodations on all overnight trains. The corporation is replacing its battery-operated lifts with mechanical lifts, which are easier to operate and present fewer maintenance problems. It is continuing to incorporate accessibility features in its more than 475 stations as they are upgraded.

Amtrak is working to improve training of its employees so that they are familiar with the appropriate ways to respond to passengers with special needs.

URBAN MASS TRANSPORTATION ADMINISTRATION (UMTA)

UMTA is the lead agency in an interdepartmental working relationship between the Department of Transportation (DOT) and the Department of Health and Human Services (DHHS). Under the terms of the interagency agreement, a staff working group has been established, and a formal executive level DOT/DHHS Transportation Coordination Council has been formed. The Council, which meets biannually, has directed that regional initiatives be undertaken in each Federal region. Federal regional staff from both Departments have worked with State program administrators to identify barriers to coordination in federally supported programs and to encourage State and local efforts to coordinate funding for specialized transportation services. The liaison between these two Departments will increase the mobility of elderly Americans by improving the coordination and effective use of transportation resources of both Departments.

¹ Prepared for the U.S. Senate Special Committee on Aging—December 1990.

² Many of the activities highlighted in this report are directed toward the needs of handicapped persons. However, one-third of the elderly are handicapped and thus will be major beneficiaries of these activities.

As a part of its efforts in the Joint Council on Coordination, UMTA and the Department of Health and Human Services developed a "Manual of Best Practices" in transportation coordination. This manual covers State and local programs which address a number of the barriers to coordination identified by the regional initiatives.

UMTA is working closely with the Administration on Aging (AOA) to develop joint initiatives to ensure closer working relationships between State transportation agencies and agencies on aging. As a part of this effort, UMTA and AOA jointly funded workshops in Texas and Ohio aimed at developing better coordination of policies and programs at the State level. The workshops identified a number of barriers in these States and developed action plans to deal with them. Under the activities of the Council, AOA and UMTA are developing a Volunteer Van Transportation Program for Native Americans who do not live on reservations. This joint program will provide vans, insurance, and maintenance for a period of 4 years to develop a community-based transportation program where no public transportation exists.

UMTA and DHHS continued to work with the Federal Region IV Transportation Consortium. The consortium is an eight-State cooperative effort in Region IV designed to achieve improvements in human service transportation delivery. Project components include development of a coordinated technical assistance mechanism among the member States; research; and identification and removal of programmatic and institution barriers to coordinated human service transportation funded by the two Departments. Particular attention is given to transportation and human service programs administered at the State level.

CAPITAL AND OPERATING ASSISTANCE

URBAN MASS TRANSPORTATION ADMINISTRATION

Under Section 16(b)(2) of the Urban Mass Transportation Act, UMTA provides assistance to private nonprofit organizations for the provision of transportation services for elderly persons and persons with disabilities. In 1990, over \$34.8 million was used to assist in the purchase of 1,435 vehicles for the provision of transportation services for these persons.

Under Section 18 of the Urban Mass Transportation Act, UMTA obligated \$84.2 million to States in 1990. These funds were to be used for capital, operating, and administration expenditures by State and local agencies, nonprofit organizations and operators of transportation systems to provide public transportation services in rural and small urban areas under 50,000 population. Under Section 9 of the Urban Mass Transportation Act, UMTA obligated \$1,699 million in 1990. These funds were to be used for capital and operating expenditures by transit agencies to provide public transportation services in urbanized areas. While these services must be open to the general public, a significant number of passengers served are elderly persons.

RESEARCH AND TECHNICAL ASSISTANCE

URBAN MASS TRANSPORTATION ADMINISTRATION

The Rural Transit Assistance Program (RTAP), in its fourth year, was authorized to expend \$5 million in fiscal year 1990. The program provides funding for training, technical assistance, research, and related support activities in rural areas. States receive 85 percent of the funding, while the remaining 15 percent is allocated to the RTAP National Program. The RTAP National Program supports among other initiatives, a National RTAP Resource Center and toll free hotline, peer-to-peer networking activity, the RTAP Bulletin, regional outreach initiatives and a 15-member Review Board which provides oversight of the training modules. The RTAP Program produces a wide range of initiatives for able-bodied, elderly and disabled individuals living in rural areas.

The National Easter Seal Society Project Action (Accessible Community Transportation in our Nation) is a \$3 million research and demonstration grant program now in the final implementation phase. National and local organizations representing public transit operators, the transit industry, and persons with disabilities are involved with the development and demonstration of workable approaches to promote access to public transportation services for people with disabilities. Project Action has identified five priority areas:

1. clarify disability problems in the community;
2. outreach and marketing strategies for people with disabilities;
3. training programs for transit providers;
4. training programs for persons with disabilities; and
5. technology to solve critical barriers to transportation and accessibility.

Project Action, through a Request for Proposal process, has identified 31 projects for funding within five priority areas. These projects should be underway by January 1991.

Project Action will also assist in the implementation of the Americans with Disabilities Act by investigating what training is necessary to sensitize transit drivers to the needs of people with various disabilities. Tie-down and securement difficulties, especially for the three wheeled motorized wheelchairs have been identified for research. Project Action has also identified for refinement and replication throughout the country the "Red Mitt" program instituted by the Southeastern Michigan Area Rapid Transit District (SMART) which allows persons with disabilities to get on a bus by merely holding up their hand with a red mitt. It does not matter whether the transit rider is at a bus stop or not. People can wait at the end of a driveway and can be picked up by a SMART bus. Project Action has also targeted other model projects to be refined and replicated throughout the country.

FEDERAL HIGHWAY ADMINISTRATION (FHWA)

In the summer of 1990, the Federal Highway Administration (FHWA) completed a study on Traffic Control Design Elements for Accommodating Drivers with Diminished Capacity. The study determines the extent that existing traffic control device elements accommodate drivers with age-related diminished performance capabilities.

In addition, the FHWA initiated four studies during the year:

Traffic Maneuver Problems of Drivers with Diminished Capacity is employing simulator and field methods in an empiric investigation of maneuvers that appear to cause difficulties for older drivers. The study will recommend highway design changes to mitigate the difficulties.

Relative Visibility of Increased Legend Size vs. Brighter Materials is studying the effects of highly retroreflective sheeting on current stroke width standards; comparing older driver responses to these brighter signs, as compared with their response to larger, signs; evaluating other legend characteristics (font, spacing, and capitalization); and will make recommendations on standards for test signs.

Older Driver Perception-Reaction Time for Intersection Sight Distance and Object Detection is evaluating the perception-reaction time of older drivers in a variety of intersection, stopping, and design sight-distance situations. The report will recommend changes to the perception-reaction time values used in highway design equations and identify alternative models for these equations.

Pavement Markings and Delineation for Older Drivers is investigating the use of improved pavement marking and delineation systems to enhance their value for older drivers.

Three studies are expected to get underway during fiscal year 1991:

Symbol Signing Design for Older Drivers will investigate the use of symbol signs for older drivers, recommend changes to current signs, and develop guidelines for design of future symbol signs.

Traffic Operations Control for Older Drivers will investigate all aspects of intersections (geometrics, signing, signals, operations) in light of older driver and pedestrian capabilities.

Design Characteristics of Older Adult Pedestrians will use analytical and empirical methods to determine the capabilities and limitations of older pedestrians, and recommend changes in design to accommodate the population. The study is expected to take 24 months.

The FHWA's National Highway Institute presented the pilot course entitled "The Older Road-User" in Denver, CO, in August 1990. This 1-day course for State, local, and Federal highway engineers is designed to make highway engineers aware of the problems and needs of older people, to help engineers understand older road-user issues, to identify current and future research and development programs for the older road-user, and to describe and use traffic control and design measures to help the older road-user.

Information is presented on population and driver demographics, and critical older driver characteristics are identified. The course describes the gradual reduction of physical, sensory-motor, and cognitive abilities associated with the aging process and sets forth compensatory strategies for mitigating the resulting problems. In addition, safety and mobility considerations are reviewed and strategies are provided for developing effective highway-related countermeasures.

NATIONAL HIGHWAY TRAFFIC SAFETY ADMINISTRATION

The National Highway Traffic Safety Administration (NHTSA) has begun analysis of data received from the National Institute on Aging under a cooperative research agreement with the agency. The project involves analyzing transportation-related data obtained from older persons whose medical histories have been followed for a number of years. Data are being examined to identify what influence medical conditions and functional capabilities have on driving and pedestrian practices in urban and rural areas. Initial results indicate that study participants have reduced the amount of both driving and walking, with a concurrent reduction in their ability to meet their transportation needs. More detailed analyses are scheduled for 1991, and implications of the findings for transportation will be reported following those analyses.

It is estimated that multiple vehicle crashes at intersections, which include most side impact crashes, are responsible for more than half of the fatal crashes involving individuals aged 80 or older. On October 24, 1990, NHTSA issued a new passenger car side impact rule to reduce side impact crash fatalities and injuries. The rule specifies the use of a side impact dummy (SID) in full-scale side impact crash tests to assess the safety performance and potential for human injury to the thorax and pelvis. It is expected that on most passenger car models, car door strength will have to be increased or padding added to the door interior in order to comply with the new rule. Compliance with these requirements is expected to save approximately 500 lives and reduce 2,600 moderate to severe injuries annually. Because of the overrepresentation of older Americans in this type of crash, their reduced ability to survive severe injuries and to fully recover from injuries in general, the new side impact rule's increased safety requirements are expected to be of particular benefit to this age group.

NHTSA, through the Transportation Research Board, has established a Task Force on the Safety and Mobility of Older Persons to provide coordination of research and development activities across the private and public sector. This task force is an outgrowth of the agency's workshop on research and development needed to insure the safety and mobility of older persons, held in 1989. It serves a multidisciplinary constituency, directing research attention to currently under-researched areas, helping to avoid unnecessary duplication of effort, and disseminating information about the latest findings in the field.

NHTSA's Traffic Safety Plan for Older Persons issued in 1988 contained a number of long-term research projects for identifying the specific factors affecting the traffic safety of an aging population. An updated Traffic Safety Plan will be prepared when the critical research projects currently under development have been completed and the specific transportation implications of the research data determined.

One of the more extensive projects identified in this plan is Development of Safety Information Materials and Media Plans for Elderly Pedestrians. This project, intended to produce and distribute safety guidance for older pedestrians to enable them to better avoid potential accident situations, is expected to be completed in April of 1991.

People 65 and older have the highest pedestrian death rate of any age group, and 58 percent of those fatalities are males. A joint NHTSA/FHWA pedestrian safety program was initiated in January 1990 to reduce traffic fatalities in this area. The major components of the program are community traffic safety program (CTSP) grants, research and development projects, technology transfer activities, and public information initiatives. The most important component of the program is the CTSP grant awards. These serve as seed moneys to expedite the initiation of pedestrian safety programs at the community level.

During the summer of 1990, seven community grants were awarded as part of the NHTSA/FHWA pedestrian safety program. The majority of the grants, which are for a period of 18 to 24 months, have an elderly pedestrian component that uses the 3 E's (education, enforcement, and engineering) approach to finding solutions to pedestrian problems the elderly face. The community programs that have resulted from the grants are diverse in their approaches in order to meet the specific needs of individual communities. An engineering module, for example, may focus on the timing of signals; an education module may be involved with developing programs at senior centers, and an enforcement module may be focused on citations for drivers violating cross walks. More community grants will be awarded in fiscal year 1991.

The technology transfer component of the joint project has produced a pedestrian resource kit that has been distributed to all NHTSA regional and state offices and

all FHWA regional and divisional offices. These kits are representative of the sort of programs and materials available in the pedestrian safety area and allow communities the opportunity to tailor programs to their specific needs.

The research and development component involves a continuation of ongoing research. In addition, FHWA and the NHTSA Office of Research and Development are beginning a median strip study that, although not specific to the older pedestrian, is a critical factor for them as part of their pedestrian habits.

NHTSA is continuing its support of the National Safety Council's (NSC) Walk Alert program by providing the NSC with a grant to revise the program, particularly the section dealing with elderly pedestrians. The revision will expand that section to present a more comprehensive program and approach. The need for revision has resulted in part from extensive community interest in improving pedestrian safety of older citizens.

The agency continues to update and refine its near-term research agenda affecting older drivers.

INFORMATION DISSEMINATION

FEDERAL RAILROAD ADMINISTRATION

To inform older and handicapped Americans about special services, brochures entitled "Access Amtrak" and the "Amtrak Travel Guide" are made available through the Railroad's Public Affairs Office. The Amtrak Travel Guide, which identifies accessible stations, is also made available through local sales offices and travel agencies.

NATIONAL HIGHWAY TRAFFIC SAFETY ADMINISTRATION (NHTSA)

NHTSA produced a report on the results of the "Conference on Research and Development Needed to Improve Safety and Mobility of Older Drivers." This report was disseminated to the research and development community and to State and local officials concerned with older drivers. Results of the conference were also presented at meetings of the Society of Automotive Engineers, American Psychological Association, Highway Users Federation for Safety and Mobility, Transportation Research Board, Gerontological Society, and the American Statistical Association. Plans were made to use results of the conference to develop a special edition of the "Human Factors" journal dealing with the older driver. This conference also provided some of the impetus for convening an international conference on Driver Performance Assessment.

NHTSA awarded a grant to the New York City Department of Transportation to produce a video for elderly pedestrians entitled: Mission Impossible—Operation Safewalk. The video, completed in the Spring of 1990, demonstrates various pedestrian crash types and avoidance techniques using senior citizens and the Mission Impossible format.

ITEM 13. DEPARTMENT OF THE TREASURY

DECEMBER 14, 1990.

DEAR MR. CHAIRMAN: I am pleased to submit, for inclusion in *Developments in Aging*, the Treasury's report on the Department's activities during 1990 which affected the aged. I hope our report will be of use to the Special Committee on Aging and others studying the problems faced by older Americans.

Sincerely,

BRYCE L. HARLOW,
Assistant Secretary (Legislative Affairs).

Enclosures.

TREASURY ACTIVITIES IN FISCAL YEAR 1990 AFFECTING THE AGED

The Treasury Department recognizes the importance and the special concerns of older Americans, a group that will comprise an increasing proportion of the population in decades ahead.

The Secretary of the Treasury is Managing Trustee of the Social Security trust funds. The short- and long-run financial status of these trust funds is presented in annual reports issued by the Trustees. The 1990 reports concluded that Old-Age and Survivors Insurance and Disability Insurance benefits can be paid on time well into the next century. As reflected in the past several reports, the financial outlook for Medicare, in particular Hospital Insurance (or Part A), may become troublesome shortly after the turn of the century. Although legislation enacted in 1990 provide

additional breathing space for the HI Trust Fund, some Congressional action may be required early in the next century.

Federal individual income taxes for 1990 reflected a larger personal exemption mandated by statute, and the adjustment for inflation of standard deductions and the width of individual income tax brackets.

The width of the income tax brackets and the size of personal exemptions and standard deductions were indexed to reflect a rate of inflation of approximately 4.7 percent and the personal exemption increased by \$50 to \$2,050.

Taxpayers age 65 or over (and taxpayers who are blind) are entitled to a larger standard deduction than other taxpayers. For 1990, each taxpayer who is single and who is at least 65 years old is entitled to an extra \$800 standard deduction. Each married taxpayer over 65 is entitled to an extra \$650 standard deduction so that a married couple both over age 65 are entitled to an extra \$1,300. Including the extra standard deduction amounts cited above and the basic standard deduction amounts, taxpayers over age 65 are entitled to the following standard deductions for tax year 1990: \$4,050 for a "single" taxpayer; \$5,550 for a taxpayer entitled to claim "unmarried head of household" status; \$6,100 for a married couple filing a joint tax return, only one of whom is over age 65; and \$6,750 for a married couple filing jointly if both are over 65.

Two other special tax provisions for the elderly were retained: the tax credit for the elderly (and permanently disabled); and the one-time exclusion of the first \$125,000 of profit from the sale of the personal residence of a taxpayer over age 55.

Legislation enacted during 1990 permits employers to withdraw excess funds from tax-qualified pension plans in order to fund health insurance benefits for retirees.

INTERNAL REVENUE SERVICE ACTIVITIES AFFECTING THE AGED

The Internal Revenue Service (IRS) recognizes the importance and special concerns of older Americans, a group that will comprise an increasing proportion of the population in the years ahead. Major programs and initiatives of the Office of the Assistant Commissioner (Taxpayer Services) that are of interest to older Americans and to others are described below.

The following publications, revised on an annual basis, are directed to older Americans:

- Publication 523, *Tax Information on Selling Your Home*, sets forth the rules regarding the once in a lifetime exclusion of \$125,000 of the gain on the sale of a personal residence of a person 55 years of age or older.
- Publication 524, *Credit for the Elderly or Disabled*, explains that individuals 65 and over are able to take the Credit for the Elderly or Disabled, reducing taxes owed. In addition, individuals under 65 who retire with a permanent disability and receive taxable income from a public or private employer because of that disability will be eligible for the credit.
- Publication 554, *Tax Information for Older Americans*, explains that single taxpayers age 65 or over are not required to file a Federal income tax return unless their gross income for 1990 is \$6,100 or more (as compared to \$5,300 for single taxpayers under age 65). Married taxpayers who can file a joint return are not required to file unless their joint gross income for 1990 is \$10,200 or more if one of the spouse is 65 or over, or \$10,850 if both spouses are 65 or over.
- Publication 721, *Comprehensive Tax Guide to U.S. Civil Service Retirement Benefits*, and Publication 575, *Pension and Annuity Income*, provides information on the tax treatment of retirement income.
- Publication 907, *Tax Information for Handicapped and Disabled Individuals*, covers tax issues of particular interest to handicapped and disabled persons and to taxpayers with disabled dependents.
- Publication 915, *Social Security Benefits and Equivalent Railroad Retirement Benefits*, assists taxpayers in determining the taxability, if any, of benefits received from Social Security and Tier I Railroad Retirement.

All publications are available free of charge. They can be obtained by using the order forms found in the tax forms packages and in Publication 910, or by calling 1-800-TAX-FORM (1-800-829-3676). Many libraries, banks, and post offices stock the most frequently requested forms, schedules, instructions and publications for taxpayers to pick up. Also, many libraries stock a reference set of IRS publications and a set of reproducible tax forms.

OUTREACH PROGRAMS INCLUDE

The *Tax Counseling for the Elderly (TCE) Program*, which provides free tax assistance to persons 60 and older. The IRS enters into cooperative agreements with

public and private nonprofit organizations (sponsors) whose members will be trained by IRS to act as volunteer tax assistants at selected sites identified by the sponsors. Sponsors also now have the option to operate telephone answering sites to assist the elderly with tax questions, help with forms, or schedule appointments. IRS assistance to older Americans through the TCE program has been growing since the program began in 1980. Nearly 28,000 volunteers helped 1.4 million persons during the past filing period.

The *Volunteer Income Tax Assistance (VITA) Program* provides tax assistance to targeted groups including low income persons, non-English speaking persons, and the elderly. The IRS trains volunteers who offer their services to taxpayers needing assistance. This service is free and many VITA volunteers also help the elderly in preparing their State and local returns and answering their questions. In addition, volunteers helped elderly taxpayers compute their estimated tax for the current tax year. New and enhanced training for volunteers will be available in 1991. The new training was developed in response to a study that included evaluations by educational authorities and surveys of volunteers and IRS employees involved in VITA and TCE.

The *Small Business Tax Education (STEP) Program* provides information about business taxes and the responsibilities of operating a small business. Through a partnership between IRS and about 1,800 community colleges, universities, and business associations, small business owners and other self-employed persons have an opportunity to learn what they need to know about business taxes. Assistance is offered at convenient community locations and times. Many elderly persons, such as those beginning second careers, avail themselves of this program.

As part of the *Banks, Post Offices, and Libraries (BPOL) Programs*, the IRS supplies 16,000 libraries with free tax aids such as reproducible tax forms, reference publications, and audio-visual materials that can assist older Americans in preparing Forms 1040EZ, 1040A, 1040 and related schedules. Also, banks and post offices distribute the Form 1040 family and other forms.

The *Community Outreach Tax Education Program* provides individuals with group income tax return preparation assistance and tax education seminars. IRS employees and trained volunteers conduct these seminars that address a variety of topics. They are tailored for groups and individuals with common tax interests, such as groups of older Americans. These seminars are conducted at a convenient community location.

One of the most significant IRS initiatives this past year affecting older Americans is the expansion of Form 1040A to allow reporting of income from pensions and annuities. In the past, persons with pensions and annuities had to file the much longer Form 1040. By providing space for pensions and annuities on the Form 1040A, 6 million older Americans will be able to file the simpler, shorter form.

Special Form 1040 and Form 1040A tax packages for older Americans, which include a schedule and instructions for the Credit for the Elderly or Disabled has been developed. These schedules and instructions include information regarding the income levels at which taxpayers are able to take the credit. This information will make it easier for taxpayers to know if they qualify for the credit.

The Tax Forms and Publications Division also reviews annually two publications for Congress. These are *Helping Older Americans Avoid Overpayment of Income Taxes*, from the Senate Special Committee on Aging, and *Federal Income Tax Guide for Older Americans*.

OTHER TREASURY ACTIVITIES AFFECTING THE AGED

Other agencies of the Treasury also have an impact on the elderly as part of their specific functions. Developments during 1990 are summarized below:

- The Financial Management Service recognizes that receiving Federal payments on time is critical to a number of older Americans, especially those who may be living on a fixed income. The Service is proud of its on-time delivery rate for all payments issued during fiscal year 1990. The Direct Deposit Program is a key factor that allows Financial Management Services to meet its goal of making payments timely. Following is a summary of activities associated with this program.

The Financial Management Service continues to promote the benefits of Direct Deposit/Electronic Funds Transfer through Direct Mail advertising. During 1990, the Financial Management Service enclosed inserts with recurring benefit checks (e.g. Civil Service Retirement, Veterans Affairs Compensation/Pension, Social Security) issued in March, April, October, and November. In January, May, July, and November, a Direct Deposit promotional message appeared on the back of check envelopes for all benefit checks. Check inserts and check en-

velope messages serve as marketing aids to promote the convenience, safety, and reliability of depositing Government payments into personal checking or savings accounts by using Direct Deposit.

The Financial Management Service has continued to support the Social Security Administration's Direct Deposit enrollment initiatives by developing and distributing specific promotional materials for the Social Security Administration's district offices nationwide. The district offices, in turn, will provide materials to benefit recipients.

In December 1989, and January 1990, the Financial Management Service and Social Security Administration continued to test the use of the ACH Prearranged Payment and Deposit special type "05" addendum record to transmit cost-of-living adjustment notices, along with the payments. The test area included Social Security Direct Deposit beneficiaries in the South Carolina and New York Automated Clearing House areas, and the Chase Manhattan Bank and its customers.

The Financial Management Service and the Social Security Administration are currently involved in a feasibility study known as "Reverse Prenote." The study will examine the feasibility of financial institutions electronically enrolling Social Security Administration's benefit recipients in Direct Deposit. Reverse Prenote is expected to speed up the enrollment process considerably and will make the first Direct Deposit payment date more predictable.

The Relations Management Project continues to focus on increasing awareness about Direct Deposit initiatives. As part of these efforts, the Financial Management Service plans to pursue an active working relationship with the Consumer Information Center, the Better Business Bureau and leading consumer trade groups. By working with these groups, we hope to receive recommendations that can be incorporated in a Direct Deposit/Consumer Brochure and can help establish other channels to disseminate information to the consumer.

Also, in 1990, the Financial Management Service's seven regional Customer Assistance Staffs continued to participate in numerous activities promoting Direct Deposit, as well as the features of the Limited Payability legislation to older Americans. The staffs met with senior citizen organizations, displayed exhibits at functions for seniors, and provided marketing materials to State Departments on Aging.

The Financial Management Service has been designated by the Office of Management and Budget as the lead agency in developing Electronic Benefit Transfer for Federal agencies. The Financial Management Service and the Social Security Administration recently completed the first test to distribute Federal benefits to the unbanked without using checks. While this test was small in scale, it was successful in delivering safe and timely payments electronically to Supplemental Security Income recipients in Baltimore, MD. The use of plastic debt cards allowed recipients to draw down their benefits through ATM and POS terminals.

A second pilot is underway in Houston, TX to provide Social Security and Supplemental Security Income recipients with a plastic debt card to receive their benefits through the existing PULSE network of ATMs and POSs. The test will begin on January 1, 1991, and run for 1 year. The Financial Management Service will also pursue another EBT test in 1991, which will issue direct Federal payments along with an existing State EBT program using one card to access the funds.

It is estimated that there are approximately 8 million individuals receiving Federal benefit payments each month who do not have bank accounts. Issuing these payments electronically will save the Government \$26 million annually and eliminate claims for lost, stolen, or misplaced checks. There is also a tremendous social savings to be realized. Annually, recipients pay approximately \$325 million to cash their checks.

—During fiscal year 1990, the U.S. Saving Bonds Division continued its efforts to provide important information about Bonds to older Americans. These efforts included advising the news media, financial institutions, and major national organizations—such as the American Association of Retired Persons—of the current interest rates, tax implications, exchange privileges, and maturity status of Bonds, particularly those purchased in the 1940's. In addition, the toll-free telephone message (1-800-US-BONDS) was frequently updated making it easier for elderly and less-mobile citizens to get current information and assistance. Also during the year, the Division continued its easy-to-purchase mail order program via IRS refund checks that resulted in Bond sales of \$7.6 million. Finally, our

promotional materials and media advertising contain specific references to the benefits of Savings Bonds in retirement.

- In February 1990, Public Debt changed its regulations to allow any outstanding, unmatured, definitive Treasury note or bond to be converted to the TREASURY DIRECT Book-Entry Securities System. Previously, securities maturing before January 1, 1990, were not eligible for conversion.

In April 1990, Public Debt initiated a project to encourage owners of registered Treasury securities to convert their holdings to book-entry form in TREASURY DIRECT or the Commercial System. This project has two phases. The first involves the Federal Reserve Banks (FRBs) and Public Debt contacting selected owners of large volumes of registered certificates. The second phase will involve direct mail contact with all registered holders beginning with those whose securities mature in the year 2000 and later.

These two initiatives will assist our elderly investors who convert their holdings to TREASURY DIRECT by:

- Eliminating the burden of safekeeping paper securities that are subject to loss, theft, or destruction;
- Simplifying record keeping for all holdings with the same registration and payment instructions; and
- Providing immediate access to funds by direct deposit of payment(s) to an account at a financial institution selected by the investor; thus, eliminating the need to prepare deposit slips or having to worry about lost or stolen checks. Also, earnings begin accumulating immediately when payments are automatically deposited into an interest bearing account.

Public Debt is continuing its efforts to locate investors owning matured registered securities which have not been presented for payment. Investors contacted are reminded that they hold matured securities, that the securities are not paying interest, and where the securities can be presented for payment. Those investors unable to locate their securities are advised to file claims with the Bureau. This initiative continues to assist elderly individuals in redeeming lost or forgotten securities.

In April 1990, Public Debt implemented a series of modifications to its Telephone Information Services menu-driven system. The menu was redesigned for easier understanding and access to desired information, the scripts were edited for clarity, and a call sequencer was added for better call distribution and to keep calls from being lost. Telephone information cards were also produced and made available to customers using the Washington, DC facility, for securities transactions. The telephone information card was designed with the elderly in mind; the print is in large bold type and there is ample spacing on the card, making it easy to read.

In September 1990, Public Debt made the pamphlet "Information About Marketable Treasury Securities (Bills, Notes and Bonds) Sold at Original Issue," Form PD P 009, available to the General Services Administration's Consumer Information Center in Pueblo, CO. The pamphlet advises potential investors on how to purchase Treasury marketable securities directly from the Treasury or the FRBs and Branches. The Consumer Information Center provides information on a variety of Federal agencies and programs. It distributes a catalog covering many things of importance to all consumers, but is very effective at reaching the elderly as a result of nationwide service advertising.

In November 1990, two major enhancements will be made to the TREASURY DIRECT Book-Entry System that will be of benefit to elderly investors. One enhancement provides for the addition of a three-character identifier that will be associated with all direct deposit (Automated Clearing House) payments. This will enable our investors to better track securities payments as they appear on bank statements.

The other enhancement will be made to the TREASURY DIRECT Statement of Account whereby security holdings will be listed chronologically in ascending order. This provides a top-to-bottom itemization by maturity date starting with the first holdings(s) to mature.

In fiscal year 1990, the savings bond regulations were revised to permit paying agents to redeem savings bonds requested by designated legal representatives or legal representatives of decedents' estates. Prior to these changes, such requests had to be forwarded to an FRB. These revisions will enable legal representatives to receive redemption proceeds immediately rather than having to await processing by an FRB. These revised regulations are expected to benefit the aged since a significant number of legal representatives represent the elderly.

In fiscal year 1990, FRBs were authorized to process claims of nonreceipt for Series EE bonds they issue if the completed claim form is received within 4 months of the issue date of the bond(s). This procedural change will ensure a high level of customer service by improving the timeframe required to replace bonds not received by customers. This program will benefit all bond owners, including the elderly.

Several savings bond forms have been revised, or are currently in the revision process, to simplify completion by making the forms easier to read, furnishing clearer instructions, and specifically designating the areas where information is required. The redesign of these forms should be especially beneficial to the aged.

The Office of Consumer Affairs continues to serve as the liaison between the Department of the Treasury and individual senior citizens and senior citizen organizations, assisting them in determining which office or department can best answer their questions or help to solve their problems. This Office works with groups concerned with senior citizens and issues that affect the elderly.

—During 1990, the Office of the Comptroller of the Currency (OCC) continued its active liaison with national based organizations including the American Association of Retired Persons to share information about banking related issues. Additionally, during 1990 OCC district offices continued their outreach programs for purposes of contacting and meeting with local consumer and community groups to share information about banking related issues. Organizations representing the elderly were among those contacted.

In March 1990 the OCC distributed a publication, *Basic Banking Services and Government Check Cashing* to all national banks, bank trade associations and bank customer groups including those representing the elderly. The publication provides guidance to bankers on innovative programs, strategies, and tools available to banks for meeting the need for basic banking services in their communities and discusses some of the major issues associated with the delivery of these banking services. These services are delivered to low and moderate income, young, retired, or other customers who may be unable to meet customary minimum balance requirements or pay regular charges associated with some conventional banking services.

The OCC continued to enforce the Equal Credit Opportunity Act and Regulation B as part of its responsibility for ensuring a high level of compliance with law by national banks. The Equal Credit Opportunity Act is particularly relevant because it prohibits discrimination in credit transactions because of age, provided the applicant has the capacity to enter into a binding contract. Enforcement of the law is carried out during examinations of national banks.

The OCC also is responsible for resolving complaints against national banks. Through the first 9 months of 1990, the OCC received over 11,000 complaints. Older Americans seek OCC's assistance in resolving problems with their bank.

—The Treasury Department continued to protect elderly recipients of Government payments through the vigilance of the Secret Service. During fiscal year 1990, the Secret Service closed 34,935 Social Security check cases. In addition, the Secret Service closed 2,798 check cases involving Veterans' benefits, 1,668 check cases involving Railroad Retirement checks, and 1,874 check cases involving Office of Personnel Management checks. The majority of these checks were issued to retirees.

The Secret Service also conducted over 7,300 investigations involving attempts by individuals to illegally divert funds during the direct deposit/electronic funds transfer process. Elderly Americans have been encouraged to utilize the electronic transfer process as a matter of convenience and as a safeguard against the loss of funds. The efforts of the Secret Service protect elderly Americans against financial losses during the electronic transfer process.

—The Bureau of Engraving and Printing continued to recognize the special needs of aging citizens during 1990. Services to assist senior citizens who tour the the Bureau's visitor center include:

- The Bureau provides CPR training on an ongoing basis to its tour, medical, and police units in the event that an emergency should occur.
- The Bureau has wheelchairs available for senior citizens touring the facility, as well as tour guides trained to assist senior citizens with special needs.
- The Bureau has constructed ramps, wide entrances, and restrooms designed to accommodate persons using wheelchairs or walkers.

With respect to Bureau employees:

- The Bureau periodically conducts a Pre-Retirement Program for employees 50 years of age and over. The Program, also available to spouses, emphasizes the

importance of planning for retirement in advance. It is offered to employees who are planning to retire within the next 5 years, and covers such areas as: calculation of benefits, financial planning, discovering hidden talents, legal affairs, relationships, and health.

- The Bureau's on-site medical staff provides life-style counseling for employees who are senior citizens. The emphasis is on wellness, prevention of disease, and includes advice on nutrition and weight control, testing of blood pressure and cholesterol level, and examination of possible vision and hearing deficiencies.
- The Customs Services does not specifically target the aged for expedited customs processing. However, the aged are included among those who are entitled to request special treatment when they arrive from abroad. Besides the elderly, that group includes persons who are handicapped or ill and are unable to wait in line, a parent arriving with several infants, and persons returning home for emergency reasons such as a death in the family. Any traveler meeting any of the above criteria may request to speak with a Customs supervisor as soon as he or she arrives in the Customs area of the airport or other Customs port of arrival. The supervisor will provide all possible assistance in expediting the traveler's Customs clearance without, of course, compromising Customs enforcement responsibilities.

In addition, Customs works with the General Services Administration and local port authorities to insure that inspection facilities including restrooms, permit the easy movement of persons who must use a wheel chair or walker.

Customs places a high priority on the tactful and courteous treatment of travelers. Although that policy is not limited to our treatment of the elderly, it may be of particular importance to people who have found it difficult to undergo a long, tiring flight from overseas and then must undergo immigration and customs processing.

- The U.S. Mint's coining facilities in Philadelphia, Pennsylvania and Denver, Colorado have excellent public tour programs. In recognition of the special concerns of older Americans:

- seating has been installed along the tour route to provide a "rest stop" for the elderly;
- accommodations for elderly visitors/customers have been developed that include accessibility through special arrangements;
- a video presentation of the production areas is available for seniors with mobility limitations which prohibit their taking part in the walking tour; and
- guest speakers are provided to senior citizens groups on request.

ITEM 14. ACTION

DECEMBER 21, 1990.

DEAR MR. CHAIRMAN: Thank you for your letter of September 24, 1990, requesting ACTION's report on our 1990 accomplishments for the next issue of *Developments in Aging*.

Fiscal year 1990 was a very successful year for ACTION's Older American Volunteer Programs—Retired Senior Volunteer Program (RSVP), Foster Grandparent Program (FGP), and Senior Companion Program (SCP). We were proud to celebrate with our FGP Volunteers and projects the Program's 25th Anniversary of serving special-needs children.

In fiscal year 1990, ACTION successfully worked with the public and private sectors to enhance both financial and nonfinancial support for all three programs. Several formal agreements with public and private organizations were made and existing non-Federal support was increased to provide new projects, new components, or additional volunteers.

The examples provided in the enclosed report demonstrate that the more than 430,000 senior volunteers supported by ACTION programs continue to make a significant and valuable contribution in their communities and to the nation.

I greatly appreciate this opportunity to submit the fiscal year 1990 report on ACTION's Older American Volunteer Programs.

Sincerely,

JANE A. KENNY,
Director.

Enclosures.

RETIRED SENIOR VOLUNTEER PROGRAM IN FISCAL YEAR 1990

In fiscal year 1990, with a budget of \$31.5 million, the Retired Senior Volunteer Program (RSVP) completed its 19th successful year. There were 750 ACTION-funded projects and over 410,000 volunteers assigned to 51,800 community agencies nationwide, providing almost 74 million hours of service. RSVP volunteers serve in courts, schools, museums, libraries, hospices, hospitals, nursing homes, and a wide range of other public and private nonprofit organizations. Volunteers serve without compensation, but may be reimbursed for, or provided with, transportation and other out-of-pocket expenses. All volunteers are covered by appropriate accident and liability insurance coverage.

The program continues to expand its efforts to match resources to the diverse needs of hundreds of American communities by providing increased opportunities for retired persons 60 years of age and older to serve their communities on a regular basis in a variety of settings. ACTION's current RSVP projects emphasize intergenerational activities, especially with "at-risk" youth, literacy, substance abuse, and in-home care.

Thirty-nine projects received "Programs of National Significance" awards totaling \$210,000. These awards will support an additional 1,295 new volunteers serving in 10 specific program areas. These areas include intergenerational activity, literacy, mentoring, and services to persons with chronic and debilitating illnesses.

A total of 318 projects received augmentations to provide some relief from inflationary increases in administrative cost items. Augmentations averaged \$1,305 and totalled \$415,000.

PROJECT EXAMPLES

Ogden, Utah

Robert L. Rowland, a 74-year-old RSVP volunteer, serves with the Weber County Library in the Intergenerational Library Assistance Project (ILAP). ILAP is an initiative implemented in 29 locations, under a cooperative agreement between ACTION and the U.S. Commission on Libraries and Information Science, to assist libraries with programs for unattended children frequenting the libraries after school and other hours when there is no one in the home.

Mr. Rowland, retired from the U.S. Forest Service, presents programs to groups of 10 to 20 children, including classes on rocks and fossils, minerals, astronomy, and photography. Mr. Rowland said the children were remarkably responsive, and he hopes he has stimulated some of them to become scientists.

Grants Pass, Oregon

The RSVP project in Josephine County, OR, has developed a Respite Service Program serving caretakers of functionally impaired elderly people throughout the county. The program began in 1982 with six volunteers. Subsequently, it has used 25 to 30 RSVP volunteers per year.

The service is designed to provide temporary relief for regular caretakers. It gives them time to run errands and attend to tasks of normal daily living, offers relief from stress and isolation, provides support and companionship and enables the caretaker to continue to care for his/her loved one.

A task force of community organizations was instrumental in planning the program and the training. Referrals are received from Community Home Care, Home Health Service, Senior Services Division, and Senior Programs. Health care professionals from the community donate their time and training for new respite volunteers and for workshops which the volunteers feel are helpful to them. They receive training in the physical and emotional factors of long-term care, communicating effectively, personal and patient safety, coping skills, stress, death and dying, understanding grief, and what Respite Volunteers can and cannot do. Care is taken to ensure adequate support for Respite Volunteers through follow-up contacts, group meetings, and the workshops.

For a number of years, RSVP volunteers served as volunteer coordinators for the program. Now, the program has a part-time paid coordinator who visits prospective clients to assess the situation and explain Respite Service policies and procedures. A volunteer is then matched with the client and a meeting is arranged. A formal agreement between the volunteer and caretaker is signed. Volunteers agree that they will serve each client for at least 3 months, at which time the situation is reassessed for possible continuation. Volunteers serve an average of 4 hours per week with each client.

Tuscaloosa, Alabama

Dr. Charles Prigmore, a 71-year-old RSVP volunteer, serves in the new Veteran-to-Veteran Support Service, implemented under an Interagency Agreement between ACTION and the Department of Veterans Affairs, to provide in-home volunteer service to veterans and their families.

Dr. Prigmore, an RSVP Veteran Companion, was assigned by the VA Medical Center in Tuscaloosa to Charles Hardy, a homebound veteran under the care of the Medical Center. The RSVP Veteran Companion became close friends over a 7-month period with Mr. Hardy before he died, and visited him regularly when he was at his home and the several times he was hospitalized. Dr. Prigmore, a veteran of WW II and a POW during the war, and Mr. Hardy, a WW II veteran, spent many of the visits discussing their combat experiences during the war. Mrs. Hardy, after her husband died, wrote a letter to express her appreciation for the respite care she received and the care of the RSVP Veteran Companion which meant so much to her husband.

Minneapolis, Minnesota

Forty-five RSVP volunteers in the RSVP who are known as "Grandfriends", serve pre-school children in 25 day care settings throughout Minneapolis and Hennepin County. It is a particularly important experience for one Grandfriend, Gordon Pascoe, who says, "I don't have grandchildren, but these children are like family to each other and to me. It has changed my life."

New Jersey

Associated Catholic Charities, the Union County RSVP grantee, began a medication awareness effort in 1986. The project director contacted the Shering-Plough Pharmaceutical Co. to develop a verbal cooperative agreement for a drug awareness effort. The Pharmaceutical Company provided names of pharmacists in Union County, some of whom were recruited to become RSVP volunteers. A planning committee (consisting of two Catholic Charity representatives, a pharmacist—who is also the Director for Health, Welfare, and Housing for the City of Elizabeth, New Jersey—and a pharmaceutical company representative) was formed to begin a statewide effort. A medication awareness skit involving both seniors and pharmacists was created to reenact some situations seniors face when they use prescription or nonprescription drugs.

The skit was created and produced by Catholic Charities. The seniors act out these true-to-life situations with a pharmacist present. After the presentation, the audience then has an opportunity to ask specific questions of the pharmacist.

In order to expand this idea statewide, the New Jersey ACTION State Program Office, the Union County RSVP, and the Pharmaceutical Company provided training to all RSVP directors. The skit was presented and copies were distributed. As a result, at least eight RSVP sponsors now include medication awareness projects in their programs. Over 100 RSVP volunteers participate statewide and have reached over 5,000 seniors on this issue.

NON-ACTION SUPPORT

Projects have successfully generated Non-ACTION resources to help expand and improve volunteer services. RSVP sponsors, their advisory councils and staff, have used imaginative and varied approaches to attract cash and in-kind contributions. RSVP's total non-ACTION support was \$33.6 million in fiscal year 1990, an increase of 7.3 percent from the previous year. Non-ACTION support was 51.6 percent of the total funding for RSVP.

CHARACTERISTICS OF RSVP VOLUNTEERS

Distribution

By sex:	Percent
Female	76
Male	24
By ethnic group:	
White	84
Black	10
Hispanic	4
Asian/Pacific Islander	1
American Indian or Alaskan Native	1

Distribution—Continued

By age:	
60-69	34
70-79	46
80 and over	20

FOSTER GRANDPARENT PROGRAM IN FISCAL YEAR 1990

The Foster Grandparent Program (FGP) is one of the most successful and respected volunteer efforts in the United States. Through FGP, low-income persons aged 60 and older provide person-to-person service to children with special or exceptional needs. The program's budget for fiscal year 1990 was \$59.6 million.

In fiscal year 1990, there were 264 ACTION-funded FGP projects in all 50 States, the District of Columbia, Puerto Rico, and the Virgin Islands. In addition, there were 13 projects totally supported by State funds.

Nearly 27,100 volunteers contributed about 21 million hours assisting children with special or exceptional needs, such as those who are mentally retarded, autistic, epileptic, and physically handicapped. Children with special needs also include those who have been abused and neglected, runaway youth, juvenile delinquents, as well as those in need of protective intervention.

Foster Grandparents assist approximately 73,100 children every day. They serve 4 hours a day, 5 days a week. The program provides certain direct benefits to these low-income volunteers, including a stipend of \$2.20 per hour in fiscal year 1990, transportation and meal assistance when needed, insurance protection, and an annual physical examination. Foster Grandparent services are provided through designated volunteer stations in public agencies and private nonprofit organizations. They include schools, hospitals, juvenile detention centers, Headstart programs, shelters for neglected children, State schools for the mentally retarded, and drug abuse rehabilitation centers.

In fiscal year 1990, \$232,000 was allocated to 18 existing projects to develop "Programs of National Significance". The objective of this new initiative is to expand program services in areas such as drug/alcohol abuse, teen parents, boarder babies, and child care programs.

PROJECT EXAMPLES*Des Moines, Iowa*

Seventeen Foster Grandparents are assigned to six nonprofit day care centers. Some of the centers are quite specialized. At the Child Development Day Care Center, which is located in a high risk area, about 90 percent of the children are wards of the court. Some have been physically or sexually abused. Not surprisingly, they have a great need for the attention that Foster Grandparents provide. For example, a Foster Grandparent is working with a 2-year-old who would not speak. Now, the child no longer puts her hand in front of her face all the time and is saying words like "dog" and "cat."

Kansas City, Kansas

Some of the children Foster Grandparents work with in Kansas City are "different" from others. They are hyperactive and irritable; many suffer from multifaceted problems and have poor social skills. These are crack children.

Four Foster Grandparents are assigned to two different emergency foster care homes. The police, or Protective Services, place children who have been removed from crack houses in these homes. The Foster Grandparents, a male and a female assigned to each foster care home, do everything from feeding and dressing their assigned children to nurturing them. In many instances, the Foster Grandparent becomes the most stable element in a child's life, providing a vital, caring presence.

Another Foster Grandparent works at the Wyandotte House Infant Care Center, a 24-hour residential center for infants from crack houses. These babies will stay at the Center a long time, some until the first grade.

New York, New York

Seventy Foster Grandparents are working with boarder babies in 11 different municipal and private hospitals in New York City. Many of the children the Foster Grandparents work with are born positive for drugs. Some of the babies are infected with AIDS. The Foster Grandparents focus on these high risk children and serve as the one consistent caregiver until a placement can be found. Some babies, once they are detoxified, are relatively easy to place. AIDS babies and deformed babies, however, are not so easy to place and often stay in the hospital for a long time. The

FGP project director noted that it is important for a baby to bond with one individual. The nurses are often too busy to provide this kind of attention. The Foster Grandparent becomes this person.

Batesville, Arkansas

Twenty Foster Grandparents assigned to the White River Area FGP project in Batesville, AR are working in seven different Headstart centers.

The children the Foster Grandparents serve come from severely deprived homes. Many have lived isolated lives.

For example, some do not know how to brush their teeth when they arrive at Headstart.

Literacy is the focus of the Foster Grandparents' activities as they seek, ultimately, to prepare their children with reading readiness skills for school. After the children are tested, the Headstart instructor develops a care plan which the Foster Grandparents follow. In this way, they can assist each child according to his or her needs.

NON-ACTION FUNDING

Some \$27.2 million in non-ACTION funding was contributed to support FGP projects nationwide. A major portion of these funds come from State governments, either through direct appropriations or contributions from State-funded agencies. The balance comes from county/city governments and private sector sources. Total non-ACTION project funds matched approximately 45 percent of the Federal appropriation for FGP in 1990.

Thirteen non-ACTION funded FGP projects are operating in the Nation today: seven in Michigan, one in Wisconsin, three in New Mexico, and two in Georgia.

CHARACTERISTICS OF FGP VOLUNTEERS

Distribution

	Percent
By sex:	
Female	89
Male	11
By ethnic group:	
White	51
Black	35
Hispanic	9
Asian	2
Native American	3
By age:	
60-69	38
70-79	48
80-84	11
85 and over	3
Foster Grandparents with Handicaps	10
Characteristics of children served by foster grandparents and volunteer stations:	
Age of children:	
0-5	36
6-14	38
15-20	21
21 plus	5

SENIOR COMPANION PROGRAM IN FISCAL YEAR 1990

The Senior Companion Program (SCP) offers person-to-person volunteer opportunities for low-income Americans 60 years of age and older. The Companions provide personal assistance and peer support, primarily to older adults. Clients served by Companions are chronically homebound with physical and mental health limitations and at risk of institutionalization. Senior Companions strengthen their clients' capacity to live independently in the community. They also ease the transition from institutions back into the community.

The program's appropriation for fiscal year 1990 was \$26.7 million, funding 143 projects and nearly 7,800 volunteer service years nationwide. Senior Companions contributed approximately 8.1 million hours assisting approximately 27,160 homebound clients.

\$520,000 for "Programs of National Significance" went to 36 projects to support 171 additional volunteer service years that (1) assist individuals with chronic and

debilitating illnesses, (2) decrease drug and alcohol abuse, and (3) provide respite care for caregivers of frail elderly individuals.

A total of \$1.037 million in administrative costs increases was awarded to the 143 SCP projects to provide some relief to projects adversely impacted by inflation. Funds were used for administrative and volunteer expenses.

PROJECT EXAMPLES

Many Companions provide critical assistance to clients in rural areas. A typical example is a 70-year-old volunteer assigned to two homebound women who live alone. One suffers from emphysema and an aneurism. She relies on her Companion to replenish oxygen supplies, buy groceries, and provide needed emotional support. The other client is a 97-year-old Alzheimer's victim. The Companion helps her with reality orientation exercises and speech pathology training. Without the Companion, both women would be institutionalized.

Hughesville, Maryland

A Senior Companion's timely intervention has enabled a 76-year-old woman recovering from hip surgery to remain in her own home. During the critical days of her hospitalization for a hip fracture, the Companion provided shopping assistance, prepared meals and helped a registered nurse with massage therapy and range of motion exercises. Through the Companion's assistance, the client is now able to walk with a cane. She regularly attends Senior Companion Program activities with minimal assistance needed.

El Paso, Texas

A 72-year-old visually impaired Hispanic Companion daily commutes 12 miles by bus to serve three other visually impaired homebound clients. All have central vision loss (macular degeneration) and benefit from supportive activities that include peer counseling, meal preparation, and reinforcement of home management adaptive techniques.

ACTION/AoA JOINT INITIATIVE FOR VULNERABLE ELDERLY

ACTION and the Administration on Aging (AoA) have entered into an Interagency Agreement to jointly provide \$1.2 million in support of a 3-year demonstration initiative that involves 11 State Agencies on Aging and 20 SCP projects as demonstration sites.

The purpose of the initiative is to expand opportunities for older volunteers and encourage the development of new programs which will enable Senior Companions to assist vulnerable homebound older persons achieve and maintain their highest level of independent living.

The scope of the Agreement's objectives, as outlined in a Memorandum of Understanding between ACTION and AoA, is to increase collaboration at all levels of both agencies to expand (a) meaningful volunteer service opportunities for older people and (b) volunteer services for the homebound elderly. A key feature involves AoA's participation in efforts to seek private sector support to extend Senior Companion services to the homebound elderly after conclusion of the 3-year demonstration period.

ACTION/VNAA PUBLIC PRIVATE PARTNERSHIP PROGRAM

The Visiting Nurse Associations of America (VNAA) received a \$1.5 million 3-year partnership grant from ACTION to stimulate private sector involvement and support to expand in-home elder care.

Under the grant, SCP and VNAA will name 18 existing local projects as subgrantees. These projects are required to generate six volunteer service years (VSYs) per site. Sites will be competitively chosen in each of the nine ACTION Regions in communities where there is a local visiting nurse association with a strong community service reputation and links to the "aging" network. A major goal of the grant is for VNAA to obtain a private sector match of \$1 million from a foundation or private corporation to further expand the number of volunteers assigned to provide in-home elder care. The combined Federal and private funding will provide volunteer service opportunities for about 200 senior citizens who will assist 400 homebound elderly to remain in their homes rather than be institutionalized.

The VNAA is the national association representing nonprofit home health agencies that offer a wide range of home health care services in rural and urban areas.

OTHER PARTNERSHIP PROGRAMS

American Foundation for the Blind (AFB)

A total of 25 Companions in four locations are serving 32 clients through a \$219,540 public/private partnership program between ACTION and AFB. The volunteers are visually impaired older people who provide one-on-one assistance to other visually impaired older people in their own homes.

The Alzheimer's Association

Fiscal year 1990 marked the end of a 2-year \$248,141 Alzheimer's Association Respite Care Grant, which supported a total of 20 volunteers in five SCP project sites. As of August 1990, the Companions provided over 2,300 hours of service to 227 families of Alzheimer's victims. An Alzheimer's care program guide was published in 1990 and a final evaluation report will be submitted in February 1991.

NON-ACTION FUNDING

There was \$14.4 million in non-ACTION funding contributed to support SCP nationwide in fiscal year 1990. The level of such funds increased over 20 percent from fiscal year 1989 through fiscal year 1990. The number of non-ACTION funded projects increased from 28 in fiscal year 1989 to 38, with most of the increase occurring in New Mexico.

CHARACTERISTICS OF SCP VOLUNTEERS

Distribution by age:	Percent
60-69	47
70-79	44
80-84	7
85+	2
Ethnic groups:	
White/Other	55
Black	32
Hispanic	8
Asian	2
Native American	3
Clients ages:	
+75	55
60-74	34
46-59	5
22-45	6
Distribution by sex:	
Female	85
Male	15

ITEM 15. COMMISSION ON CIVIL RIGHTS

DECEMBER 10, 1990.

DEAR MR. CHAIRMAN: This is in response to your letter to Arthur A. Fletcher, Chairman of the U.S. Commission on Civil Rights, requesting information for your annual report, *Developments in Aging*.

During fiscal year 1990, the Commission continued to process complaints; of 1,762 complaints received, 33 alleged discrimination on the basis of age and were referred to the appropriate agency. (The Commission is not authorized to investigate complaints, except for those alleging denial of voting rights.)

In fiscal year 1990, the Commission began a study of the types of age discrimination recognized by State and Federal courts and administrative agencies in the context of employment. The project focuses primarily on the Federal Age Discrimination in Employment Act, statutory exceptions to that Act, the Equal Employment Opportunity Commission's enforcement of the Act, and the Act's recent amendments.

The Vermont State Advisory Committee Report, *Ageism Affecting the Hiring and Employment of Older Workers*, was approved by the Commissioners in September 1990 and is scheduled for release in the future.

If you have any questions regarding this information, please feel free to contact my Executive Assistant, Ms. Romey Lucero, at 202/523-5571.

Sincerely,

WILFREDO J. GONZALEZ,
Staff Director.

ITEM 16. CONSUMER PRODUCT SAFETY COMMISSION

OCTOBER 18, 1990.

DEAR MR. CHAIRMAN: Enclosed, as you requested, is a report by the U.S. Consumer Product Safety Commission (CPSC) on the Commission's activities to improve safety for older consumers.

I appreciate the opportunity to submit this information to your committee.

Sincerely,

JACQUELINE JONES-SMITH.

Enclosure.

REPORT ON ACTIVITIES TO IMPROVE SAFETY FOR OLDER CONSUMERS

In 1990, the U.S. Consumer Product Safety Commission (CPSC) continued to distribute several publications developed in previous years to promote safety for older consumers. These publications include:

- “Home Safety Checklist for Older Consumers,” a room-by-room check of the home, identifying hazards and recommending ways to avoid injury. Older people (age 65 and up) were involved in about 7 percent of all emergency room-treated injuries last year, a proportion somewhat smaller than their representation in the U.S. Population (about 12 percent). However, when accidental deaths were examined, CPSC found that the rate of fatal injury for persons over age 65 was more than double the rate for persons under age 65.
- “Product Safety and the Older Consumer: What Manufacturers/Designers Need to Consider,” a booklet for manufacturers and designers of products used by older people. The booklet identifies several design changes that would make consumer products safer for older people to use.
- “What Smart Shoppers Know About Nightwear Safety,” a brochure developed by a group of experts in apparel flammability and distributed jointly by CPSC and the American Association of Retired Persons (AARP). The brochure encourages older consumers to look for sleepwear that is flame resistant.

CPSC has been active on two projects related to older consumers:

- “Nightwear for Older People” encourages the industry to promote flame-resistant sleepwear for older consumers. Although the Commission is not planning mandatory standards, we have been working with the industry and others to help reduce deaths and burn injuries suffered by older consumers each year in sleepwear fires. An early result of this project was the development of the brochure (“What Smart Shoppers Know About Nightwear Safety”) jointly distributed by CPSC and AARP.
- “Innovative Child-Resistant Packaging” project demonstrated that child-resistant packaging can be developed that is easier for older people to use but is still child-resistant. CPSC has data estimating that the widespread use of child-resistant closures on oral prescription medicines saved the lives of 340 children under age 5 between 1974 and 1986. However, many adults (including older consumers) do not use child-resistant packaging because they find it physically difficult to use. In August 1990, the Commission voted unanimously to propose amending its regulations under the Poison Prevention Packaging Act to make packaging easier to open by adults, but still retain child resistance. The Commission decided to change the regulation by requiring that the 100 adults on the test panel be 60 to 75 years of age and that these adults be able to open the package within 1 minute. This is expected to increase the use of child-resistant closures by all adults.

ITEM 17. ENVIRONMENTAL PROTECTION AGENCY

NOVEMBER 16, 1990.

DEAR MR. CHAIRMAN: In response to your request of September 24, 1990, to Administrator Reilly regarding information on the activities of older workers at the Environmental Protection Agency to be included in your annual report, *Developments in Aging*. I have enclosed a summary report of the activities of the Senior Environmental Employment Program for 1990.

Sincerely yours,

ERICH W. BRETTTHAUER,
Assistant Administrator for Research and Development.

Enclosure.

ENVIRONMENTAL PROTECTION AGENCY

In 1976, the U.S. Environmental Protection Agency (EPA) and the Administration of Aging established the Senior Environmental Employment (SEE) Program. The program has two purposes. It demonstrates the effectiveness of older Americans in helping to prevent, abate, and control environmental pollution. It also provides meaningful employment to retired/unemployed older Americans who have a wealth of talent, experience, and skills.

For 15 years, EPA has used the SEE program to marshal the expertise of older Americans in support of the Agency's Legislative Goals. Older workers are stationed in all of EPA's 10 regional offices, 20 laboratories, field sites and several State offices. Retired noise experts have provided technical assistance to local communities in conducting noise surveys and serving as noise abatement teachers in classes for local businessmen. When indoor radiation became a major public concern, SEE experts helped to gather and analyze samples, maintain equipment, and answer questions for local citizens. In the area of solid waste management, SEE enrollees provided the experienced "extra hands and minds" to help local communities establish proper disposal procedures. Through the Asbestos in Schools program, a small army of very knowledgeable SEE enrollees were temporarily hired and trained to work with local school districts to assess the problem and recommend the technically correct remedial action.

During the past year, the Office of Management and Budget (OMB) endorsed two legislative initiatives to duplicate EPA's very successful SEE Program in other Federal Agencies. Earlier this summer, the new legislative packages were presented to Congress to create a Senior Employment Program which utilizes the extensive experience and talents of older Americans for the Federal Communications Commission (FCC) and the Occupational Safety and Health Commission (OSHA). The FCC program has already been signed into law; and the OSHA proposal will be introduced early in the 102d Congress. At the same time, additional support of EPA's SEE staff, again using EPA's program as the model, for the Federal Departments of Interior, Agriculture, Defense, Veterans Affairs, and in the States.

No matter what is the critical environmental concern of the day—from understanding and explaining in a credible manner the analyzed data of nearby toxic exposures to local citizens and politicians or providing the "hands-on" sea of local monitors to spot check underground storage tanks and nozzle violations—the SEE program marshalls the temporary technical talent when and where it is most needed. In a true sense, the Federal Government has finally begun to draw upon a vast and previously untapped natural resource.

ITEM 18. EQUAL EMPLOYMENT OPPORTUNITY COMMISSION

OCTOBER 18, 1990.

DEAR CHAIRMAN PRYOR: On behalf of Chairman Kemp, I am responding to your September 24, 1990 request for the Equal Employment Opportunity Commission's submission for the committee's annual report, *Developments in Aging*.

Enclosed are copies of fiscal year 1989 annual reports from EEOC's Office of General Counsel¹ and Office of Program Operations. These reports contain information on EEOC's compliance and litigation enforcement efforts on behalf of victims of employment discrimination.

Please call me at 663-4900 if I can be of further assistance.

Sincerely,

JAMES C. LAFFERTY,
Director of Communications and Legislative Affairs.

Enclosures.

¹ This report is kept in Committee files.

EQUAL EMPLOYMENT OPPORTUNITY COMMISSION



**Office of Program Operations
Annual Report
Fiscal Year 1989**

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INTRODUCTION

To ensure equality of opportunity by vigorously enforcing federal legislation prohibiting discrimination in employment through investigation, conciliation, litigation, coordination, regulation in the federal sector, and through education, policy research and provision of technical assistance.

(EEOC's Mission)

The Office of Program Operations (OPO) was created in 1982 to manage administrative enforcement activities mandated by federal statutes and the EEOC mission statement.

The Director of the Office of Program Operations serves as a principal advisor to the Chairman on equal employment opportunity, administrative enforcement and government affirmative action matters. The staff ensures the effective and efficient management of the Commission's administrative enforcement and government affirmative action programs. The Immediate Office of the Program Director has overall supervisory, managerial and fiscal responsibility for the six program areas in headquarters and for the fifty field offices which carry out the program activities associated with EEOC's law enforcement mandate.

This annual report provides information regarding the status and accomplishments of OPO in Fiscal Year 1989. The report is divided into five sections: (1) the introduction; (2) an executive summary; (3) an overview of OPO including the organization, the mission, the functions of component programs, and FY 1989 goals and objectives; (4) a review of program area accomplishments; and (5) an appendix.

The executive summary, complete with charts, presents the major accomplishments for the fiscal year. Following the summary, information is provided on the organizational structure, mission and functions of OPO headquarters and district offices as well as OPO goals and objectives for 1989. The organizational structure of OPO, down to division staff and including the location of district offices, is illustrated. In the fourth section of the report, the accomplishments of each program are detailed and more in-depth descriptions of primary program areas are provided. The appendices provide supporting charts and data tables regarding agency change and complaint processing performance trends.

EXECUTIVE SUMMARY

The Office of Program Operations accomplished its major program goals and objectives during Fiscal Year 1989. The focus of OPO staff and activities in headquarters and in the 50 field offices, during the past two years, has been on enhancing the efficiency of operations while improving the quality of charge resolution work. The best statement of headquarters and field achievement in these areas is the measurement of year-end results attained in the agency-wide charge processing performance indicators. These results reflect major reduction of the charge/complaint pending workloads, maintenance of high staff productivity in charge and complaint resolutions, increased results in the systemic charge process, reduction in rework of cases as directed by management review, reduction in average processing time, and increased litigation activity.

Several OPO-wide initiatives came to full fruition during the year, including implementation of uniform methods of case development and management throughout the field offices; full utilization of better Automated Data Processing (ADP) systems for tracking and monitoring the workload; establishment of on-site investigation as a significant means of evidentiary development; and, increased managerial attention to employee participation and work environment. All of these initiatives contributed to the considerable progress realized this year. The commitment of OPO field and headquarters staff to implementation of these initiatives and to agency-wide principles of teamwork between employees and management was never more evident than during this period.

Headquarters components developed several innovative approaches to field support and overall accomplishment of OPO responsibility during FY 1989. New ADP software systems that provide field offices with current EEO work force survey data were completed and disseminated during this period. Sound database management techniques were utilized which led to more timely and accurate trend

EXECUTIVE SUMMARY

analyses of EEOC and federal activities, and better decisions regarding caseload and resource management were developed by OPO staff during the year. New directions in program research resulted in various scholarly studies of internal work practices and management systems, specific respondent work forces, and national EEO issues that enhanced the agency's pattern and practice work and performance measurement efforts. Guidelines and instructions were developed in additional areas of federal complaints processing and affirmative employment during this period.

Overall, the progress and accomplishments realized OPO-wide during FY 1989 represent the high degree to which the "culture of excellence," championed by the Chairman during recent years, has been institutionalized as a part of the work ethic of Commission employees and management. These accomplishments, highlighted graphically in this summary, are fully described in the FY '89 ANNUAL REPORT replete with supporting data charts and tables.

SELECTED PERFORMANCE INDICATORS

Comparative Progress in Charge/Complaint Performance Indicators

	1987	1988	1989	% Change '87-'89
(1) Reduction of agency-wide pending inventory by 10%	61,686	53,780	46,071	- 25.3%
(2) Reduction of aged charges to 15 percent of pending inventory *	26.0%	29.7%	24.2%	- 1.8%
(3) Reduction in charge workload per assigned investigator	75	57	52	- 30.7%
(4) Reduction in the average processing days required to resolve charges **	200	326	295	+ 5.4%
(5) Increase in the number of quality litigation cases developed and recommended to the Commission	557	764	904	+ 62.3%
(6) Reduction of agency-wide hearings inventory	3,929	2,651	2,159	- 45.0%

* Beginning in FY 1988 the point-of-count for aged cases was changed from 300 days to 270 days. This change resulted in an increase in the percentage of cases in the aged category.

** Increased emphasis on closing aged cases resulted in a higher average age of cases closed.

EXECUTIVE SUMMARY

Individual productivity in both enforcement and hearings units remained constant with FY 1988. Enforcement units averaged 79.0 resolutions per investigator compared to 80.4 the previous year, while administrative judges (AJs) averaged 82.1 resolutions compared to FY 1988 productivity of 82.0.

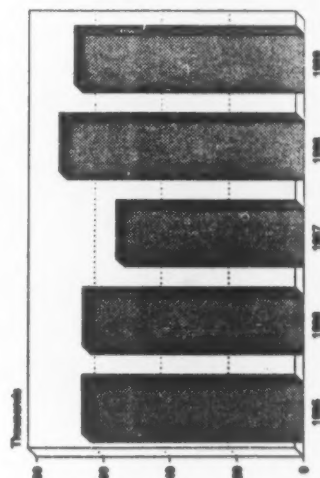
The number of charges resolved by enforcement units this year was 10,257 more than received, a 1.18 ratio of closures to receipts.

More than 68,000 charges were resolved during the year, a decrease of 6.4 percent from FY 1988. This decrease was due to reductions in investigative staff.

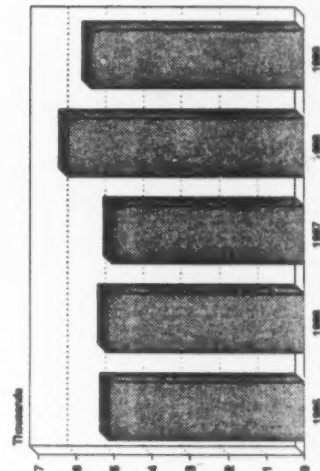
Hearings units resolved 5,619 complaints during the year, 436 more than the 5,183 complaints filed. This is a 1.08 ratio of resolutions to receipts.

Total hearings resolutions decreased 9.8 percent from 6,227 in FY 1988 to 5,619. This decrease in production is commensurate with the reduction in AJ staff.

ENFORCEMENT RESOLUTIONS



HEARINGS RESOLUTIONS



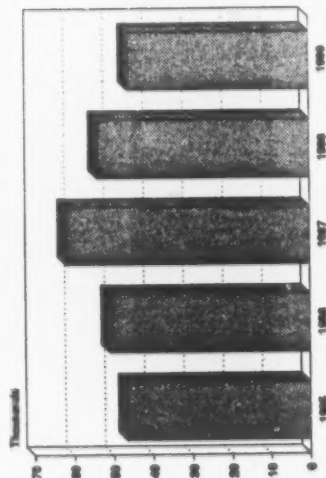
EXECUTIVE SUMMARY

Field office staff, through full implementation of agency case management initiatives and uniform tracking of programmatic objectives, exceeded the inventory reduction goals in both private sector enforcement and federal complaint activities. The agency's success in reducing inventory which began in FY 1988 continued.

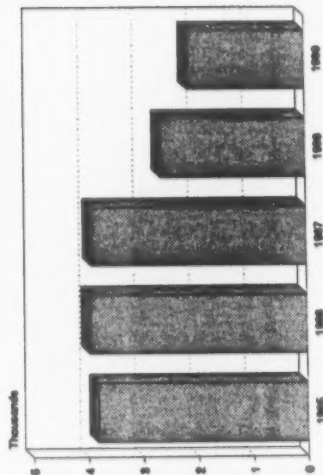
Pending inventory was reduced by 14.3 percent during the year, a reduction of 7,709 charges. This was 1.5 percentage points greater than the FY 1988 reduction.

The hearings inventory was reduced by 18.6 percent in FY 1989, continuing a trend that began in FY 1986: from a high of 3,959 in FY 1986, to 3,929 in FY 1987, to 2,651 in FY 1988 and to 2,159 in FY 1989.

ENFORCEMENT PENDING INVENTORY



HEARINGS PENDING INVENTORY



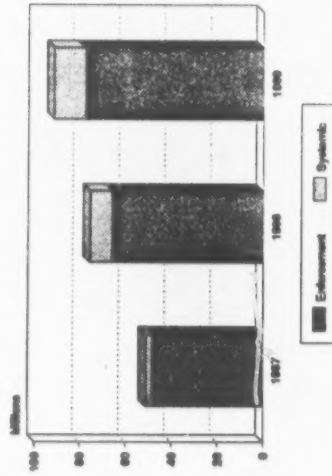
Monetary benefits obtained through the administrative enforcement of individual and class charges continued to increase reaching 91.4 million dollars in FY 1989, a 21.2 percent increase over the previous year.

Approximately 13.9 million dollars were secured through discrimination awards resulting from systemic unit investigations, an increase of 44.4 percent over FY 1988.

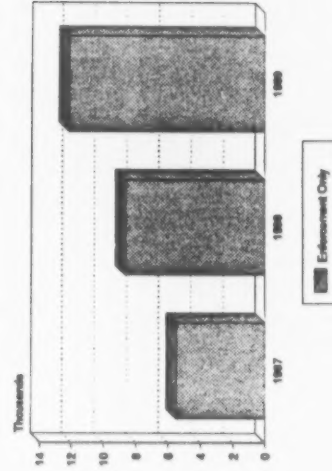
FY 1989 enforcement unit actions resulted in monetary benefits of 77.5 million dollars, an increase of 17.8 percent over the year before.

There were 12,187 people who benefited from the 77.5 million dollars obtained through enforcement unit efforts. This was an increase over the previous year of 40.6 percent (3,520 more people who benefited monetarily).

MONETARY BENEFITS



PEOPLE BENEFITED MONETARILY



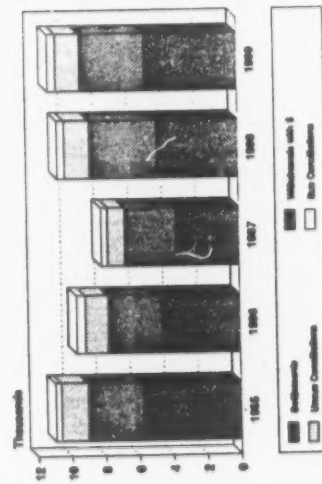
EXECUTIVE SUMMARY

An upward trend in merit resolutions continued in FY 1989. Merit resolutions include settlements, withdrawals with benefits and successful and unsuccessful conciliations. The conciliation process begins only after issuance of a determination that there is reasonable cause to believe discrimination has occurred.

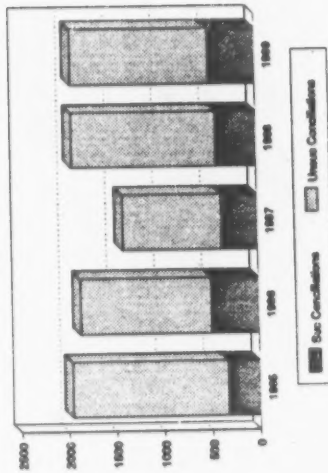
Reasonable cause determinations remained close to the same percentage of total merit resolutions (17.4 percent) as in FY 1988 (18.2 percent).

Merit resolutions increased by 4.9 percent during the year. More than 80 percent of the total merit resolutions resulted from settlements and withdrawals with benefits.

MERIT RESOLUTIONS



REASONABLE CAUSE RESOLUTIONS



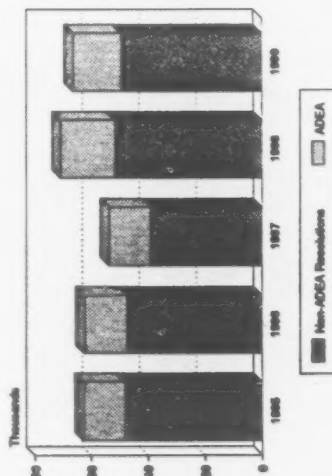
EXECUTIVE SUMMARY

For the second consecutive year, the number of resolutions of Age Discrimination in Employment Act (ADEA) charges was greater than the number received. The resolution and receipts to process totals illustrated below include charges filed under ADEA as well as those filed concurrently under ADEA and Title VII.

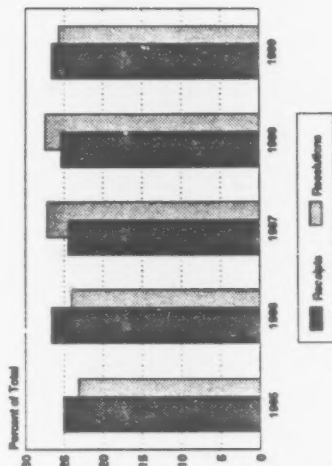
ADEA resolutions represented 25.7 percent of the total resolutions in FY 1989. This is a decrease of 1.8 percentage points from last year's rate of 27.5 percent.

Receipts to process alleging ADEA violations represented 26.4 percent of all EEOC receipts to process during the year. There were 1.15 ADEA charges resolved for every ADEA receipt to process in FY 1989.

ADEA TO NON-ADEA RESOLUTIONS



ADEA COMPARISON/RECEIPTS TO RESOLUTIONS



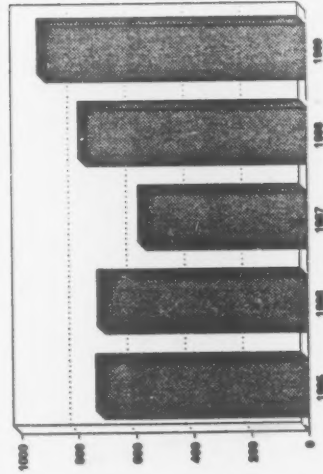
EXECUTIVE SUMMARY

Field offices increased the number of litigation recommendations submitted to the Office of General Counsel (OGC) in FY 1989 from 764 to 904. There was also an increase reported by OGC in the number of law suits filed.

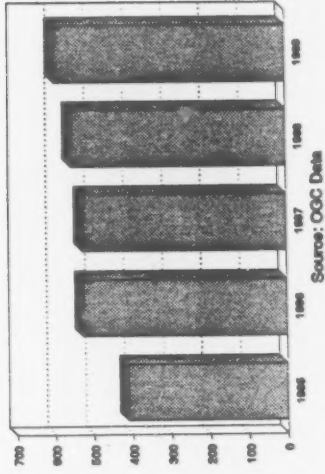
A total of 904 litigation recommendations were submitted by field offices in FY 1989. This was an increase of 18.3 percent over the previous fiscal year.

OGC reported an increase in the number of law suits filed to 599. This was 44 (7.9 percent) more than the 555 suits filed in FY 1988.

TOTAL LITIGATION RECOMMENDATIONS



TOTAL SUITS FILED



Source: OGC Data

OFFICE OF PROGRAM OPERATIONS: OVERVIEW

ORGANIZATION, MISSION AND FUNCTIONS OF PROGRAM COMPONENTS

The Office of Program Operations includes the Office of the Director and six program areas structured to ensure efficient realization of OPO goals and objectives. The mission and component functions of each program are provided below.

Office of the Director

Provides overall direction, coordination, leadership and administrative support to the OPO program areas and has supervisory, management and fiscal responsibility for the Office of Program Operations.

Field Management Programs, East and West (FMP)

Ensures effective and efficient operation of field offices through operational oversight and monitoring of program implementation, evaluation of performance, and provision and coordination of administrative services.

Headquarters Field Management Programs is divided into East and West geographic regions for effective management of the 50 field offices. The field offices are charged with

- accomplishing the statutory responsibilities of the Commission through investigation, conciliation and litigation of charges filed;
- achieving timely and appropriate resolution of discrimination charges through the efficient administration and effective implementation of case management systems; and,
- completing other Commission designated responsibilities within their geographical areas of jurisdiction.

OFFICE OF PROGRAM OPERATIONS: OVERVIEW

Systemic Investigations and Individual Compliance Programs (SIICP)

Develops and recommends charge processing procedures, provides technical and administrative support systems for systemic and individual charge investigation, and develops intermittent instructions which assist field staff in the timely enforcement of Title VII, EPA, and ADEA. SIICP investigates large systemic charges and provides case-by-case technical assistance to district offices as they accomplish pattern and practice charge investigative responsibilities. SIICP is also responsible for the development and monitoring of EEOC's work-sharing relationship with the state and local Fair Employment Practices Agencies (FEPAs) and Tribal Employment Rights Organizations (TEROs).

Federal Sector Programs (FSP)

Provides leadership and guidance to federal agencies on all aspects of the federal government's equal employment opportunity program. FSP develops proposed policies and monitors implementation of approved affirmative employment policies and programs designed to ensure hiring, placement and advancement of minorities, women and people with disabilities in the federal government. FSP also has oversight responsibility for federal agency pre-appellate complaint processing programs, with specific program management responsibility at the hearing stage.

Determinations Review Program (DRP)

Reviews charge resolutions upon request of charging parties in which field staff has determined that there is no reasonable cause to believe the charges have merit. DRP's full review of charge investigations is completed by both investigators and attorneys and may sustain the field determination, cause the charge to be remanded for further investigation, or may recommend reversal to the Program Director.

OFFICE OF PROGRAM OPERATIONS: OVERVIEW

Operations Research and Planning Programs (ORPP)

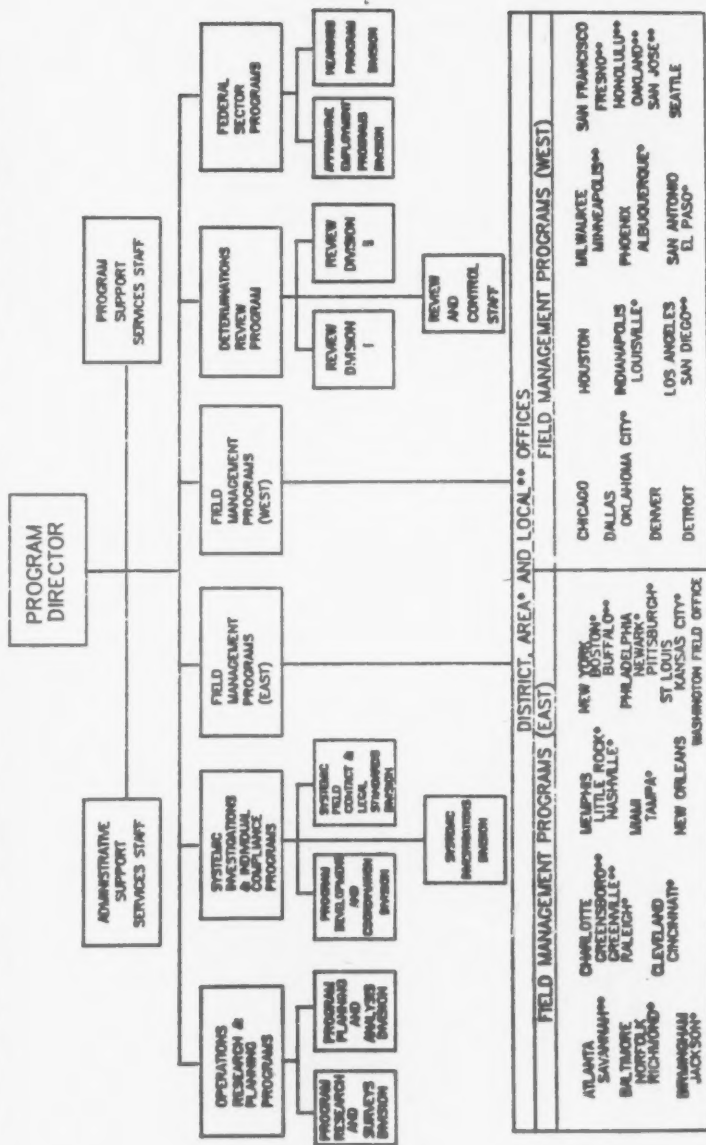
Produces summary statistical reports of data required by OPO in planning and carrying out its functions; designs and conducts surveys of employment sectors; analyzes data from employment sectors and also from OPO field and headquarters offices; produces research reports on the employment sector; conducts and issues reports on effective field office investigative strategies; and provides long and short range planning systems from which OPO decisions regarding operational plans and goals, resource and staffing determinations and workload distribution may be made on a national and office specific basis.

Program Support Services Staff (PSSS)

Provides program related services and assistance to headquarters and field components of OPO in accomplishing its mission and goals; designs and implements staff development efforts and related improvement programs to enhance the quality of the agency's charge processing and case and resource management.

Administrative Support Services Staff (ASSS)

Provides administrative and technical support and services to all OPO components. In addition, conducts comparative analyses of financial transactions and monitors their impact on budget allocations; administers the OPO management reporting system; and, conducts special studies and evaluations on specific program office units.



OFFICE OF PROGRAM OPERATIONS: OVERVIEW

FISCAL YEAR 1989 MISSION AREAS:

- (1) Ensure quality and timeliness of agency wide charge/complaint processing (compliance, systemic, hearings, and litigation development)
- (2) Ensure efficient and effective equal employment opportunity programs in the federal sector
- (3) Ensure effective accomplishment of operational responsibilities

The Office of Program Operations set major program goals and a number of objectives under its three mission areas for Fiscal Year 1989. The following major objectives emphasize program activities encompassed in the three FY 1989 mission areas.

To implement uniform case management principles and systems for timely identification and resolution of problems and technical assistance for field offices charge processing activities and federal hearings process.

To develop and implement appropriate review and oversight for identification and correction of problems and to improve evaluation of performance and provision of technical assistance for field charge resolution activities and systemic charge processing.

To develop data management systems, research activities, and reporting systems to enhance statistical analyses in support of field charge resolution, agency wide charge/complaint processing, federal complaint processing and affirmative employment programs, and internal headquarters and field management decisions.

To develop and communicate policy and procedural guidance for field office enforcement in private sector charge processing and for federal agency compliance with complaints processing systems and affirmative employment requirements.

To develop and implement innovative techniques and approaches to enhance the enforcement capabilities of the state and local FEPAs and TEROs.

To implement activities designed to enhance the general public's knowledge of rights, respondents' knowledge of responsibilities, and FEPA staffs' ability to perform.

To improve field/headquarters communication and coordination.

OPO ACCOMPLISHMENTS

FIELD MANAGEMENT PROGRAMS

Field Management Programs (FMP) is responsible for managerial oversight of all field activities. FMP analyzes performance data and other information from field offices at the end of each quarter to determine the extent to which overall goals and objectives are being met. This information is then used to introduce appropriate national and office-specific programs to continue to improve the high level of field office performance. FMP's management oversight activities resulted in more consistency of field performance throughout the year.

Charge Receipts to Process

During the year, EEOC and FEPA's received 108,406 charges/complaints filed by individuals. Of these, 55,952 (51.6 percent) were EEOC charges for processing which is a 4.9 percent reduction compared to FY 1988 and continues a trend that began in FY 1986. Intake procedures, which were modified in FY 1987, have resulted in better screening of potential charges and have generally improved the quality of charges in the system. The new procedures may be among factors that contribute to a continuing decline in receipts to process. (See data chart on page A.1 and data summary table on page B.1.)

Of the 55,952 charges EEOC received to process, 71.4 percent (39,975) were filed solely under Title VII, while 26.4 percent (14,789) were filed under ADEA or were filed concurrently under ADEA and Title VII. The remaining 2.2 percent (1,188) alleged violations of the Equal Pay Act (EPA) or were filed concurrently under the three statutes enforced by the agency. (See data summary table on page B.1.)

FEPA receipts to process totaled 52,454 or 48.4 percent of the 108,406 charges/complaints filed. This represents a decrease from FY 1988 of 11.2 percent in FEPA receipts to process. FEPA receipts to process this year included 42,548 (81.1 percent) charges filed solely under Title VII, 9,822 (18.7 percent) filed under ADEA and ADEA/Title VII, and the remaining 64 (0.2 percent) under EPA, EPA and Title VII or concurrently under all three statutes. (See data summary table on page B.1)

Charge Resolutions

There is continuing emphasis on improving the quality and timeliness of charge resolution, and, despite staff reductions, field offices made solid gains in charge resolution this year. The 50 field offices resolved 1.18 charges for every charge received for processing which led to the resolution of 66,209 charges. Although productivity per available investigator remained relatively stable, total resolutions decreased by 6.4 percent due to a reduction in staff. (See data summary chart on page A.3.)

Pending Inventory

For the last two years, field offices have exceeded the 10 percent inventory reduction goal. During FY 1989, field offices reduced pending inventory by 14.3 percent to 46,071 charges, an 8.5 month workload. This continues the trend begun in FY 1988 with a reduction of 12.8 percent to 53,780 charges, a 9.4 month workload. (See data chart on page A.2 and data summary table on page B.4.)

Aged Cases

Aged cases are defined as cases which are more than 270 days old. Goals have been set each year for reducing the number of such charges in the workload. During FY 1989, the percentage of aged cases in the pending inventory declined from 29.7 to 24.2 percent. Furthermore, seven of the fifty field offices ended the year with no aged cases in their inventories. Another timeliness indicator also showed improvement, as average processing time was reduced by 31 days, from 326 to 295 days.

Merit Resolutions

Merit resolutions, which reflect EEOC's commitment to quality, include settlements, withdrawals with benefits, successful conciliations and unsuccessful conciliations. It has been the agency's experience that improvement in the quality of investigations can increase the rate of merit resolutions. During the year, the merit resolution factor increased by 1.8 percentage points, from 15.0 percent of total resolutions to 16.8 percent. (See data summary table on page B.2.)

OPO ACCOMPLISHMENTS

Determinations on the Merits

Determinations on the merits reflected three types of resolutions obtained through full investigation - no reasonable cause determinations and successful and unsuccessful conciliations. There were 37,837 determinations on the merits during the year, 57.1 percent of all resolutions. Of those, 1,941 were resolved in the charging party's favor as reasonable cause determinations. On-site investigations became a major means this year of developing the evidence needed to reach determinations on the merits, as field offices increased the number of on-site investigations. A ratio of 36.3 (13,736 on-sites to 37,837 determinations on the merits) was achieved. (See data summary table on page B.5.)

FEPA Resolutions

Approximately 27 percent of the total FEPA resolutions were merit resolution closures, consisting of 17.1 percent settlements, 1.6 percent successful conciliations, 0.3 percent unsuccessful conciliations and 8.1 percent withdrawals with settlements. Another 51.1 percent were no reasonable cause resolutions, and the remaining 21.8 percent were closed administratively.

Benefits

EEOC field offices again achieved a considerable increase in the monetary benefits awarded as a result of charge resolution efforts. The \$91,363,522 gained through both systemic and individual charge processing activities resulted in an increase of 21.2 percent (\$15,962,228) over FY 1988 benefits. The combined monetary benefits included \$77,478,349 from the processing of individual charges of discrimination which benefited 12,187 people for an average of \$6,357 per person. (See data chart on page A.4 and data summary tables on pages B.7 and B.8.)

Non-monetary benefits resulting from enforcement unit actions also continued to increase. There were 54,866 people who received non-monetary benefits this year, a twelve-fold increase from the 4,252 people who received such benefits in FY 1988.

OPO ACCOMPLISHMENTS

Litigation Recommendations

One measure of the quality of investigations conducted in the field offices is the development of cases which result in litigation recommendations forwarded to the Office of General Counsel (OGC) and the Commission for approval. The trend for increases in the number of litigation recommendations continued for the second year. Field offices forwarded 904 presentation memoranda to OGC, an increase of 140, or 18.3 percent, over the 764 forwarded in FY 1988. (See data summary table on page B.7.)

FMP Initiatives

FMP continued to emphasize case management initiatives in the field offices and delivered training in case management to managers and supervisors in 19 districts. Another aspect of FMP's on-going effort to enhance quality is conducting on-site audits of field offices. During the year, FMP staff conducted quality audits in 19 of the 24 districts and, in addition, visited 9 districts to provide technical assistance.

Technical Assistance/Education Programs

Field offices continued to provide technical assistance and educational programs to area employers during the year in spite of budgetary constraints. Outreach program efforts included 70 voluntary assistance program (VAP) presentations which instructed 4,670 individuals (representing 1,026 employers) of their rights and responsibilities under the statutes. Field offices also provided information and assistance to the public on the Immigration Reform and Control Act, and other areas of emphasis, through numerous conferences, public appearances, and dissemination of reference material.

OPO ACCOMPLISHMENTS

SYSTEMIC INVESTIGATIONS
AND INDIVIDUAL COMPLIANCE
PROGRAMS

Systemic Investigations and Individual Compliance Programs (SIICP) is responsible for identifying and investigating large pattern and practice discrimination cases. SIICP provides technical guidance to the field offices concerning their processing of pattern and practice and limited scope Commissioner charges. Monitoring the work sharing agreements of the FEPA and TERO Programs is also part of SIICP's responsibilities.

Total Actions

The Commission approved 59 systemic case actions this year, and an additional 6 actions were taken on ADEA directed investigations for a total of 65 case actions. This represents an increase of 27.5 percent over the 51 actions taken in the previous year. This year's case actions included 30 (46.2 percent) final decisions on the merits compared to 19 such decisions in FY 1988, an increase of 57.9 percent. The remaining 35 actions consisted of 9 settlements, 11 conciliations and 15 new charges. As a result of these actions, the nation-wide pattern and practice enforcement by the Commission has been enhanced. (See data chart on page B.6.)

Final Actions

Of 30 final decisions approved, 11 ended the investigations on charges filed on or before 1982. Settlements ended processing of another six of these older cases, and together with five conciliation failures, over thirty-five such cases on the nationwide systemic docket were resolved. By making demonstrable progress in resolving these older cases, field offices were able to enhance timeliness and quality processing of current cases.

Benefits

Systemic investigations and decisions resulted in the continued upward trend in dollar benefits to victims of discrimination. Monetary benefits obtained from the processing of systemic charges increased to \$13,885,173. The total includes \$11,570,632 in benefits for 1,187 identified people as well as \$2,314,541 in other monetary benefits. (See data summary charts on pages B.7 and B.8.)

OPO ACCOMPLISHMENTS

FEDERAL SECTOR PROGRAMS

Federal Sector Programs (FSP) staff provides leadership and guidance to federal agencies on all aspects of the federal government equal employment opportunities programs. FSP staff also provides the necessary program guidance and instruction to administrative judges (AJs) in EEOC field offices who hold hearings on complaints against federal agencies nationwide.

Hearings

Hearings productivity per AJ remained steady, while staff was reduced by 10.5 percent - from 76 to 68 AJs. As a result, the 5,619 cases closed through the hearings process represented a decrease of 9.8 percent (608 cases) from FY 1988. However, individual productivity remained high, at 82.1 resolutions per AJ, and the pending hearings inventory was reduced by 18.6 percent. (See data chart on page A.2 and data summary table on page B.9)

Of the 5,619 cases resolved by hearings staff, 5,459 (97.7 percent) were individual complaints, and the remaining 128 (2.3 percent of the resolutions) were class cases. There were 2,214 (39.4 percent of total resolutions) cases closed with recommended decisions and 3,277 (58.3 percent) closed without decisions. About one-half of the cases closed with recommended decisions were closed with written decisions and the other half were closed with decisions from the bench. Those cases closed without recommended decisions included:

- 1,565 settlements (27.9 percent of total resolutions)
- 988 remanded to agencies (17.6 percent of total resolutions)
- 724 withdrawn by complainants (12.9 percent of total resolutions)

Field office hearings units significantly improved their average processing time (i.e., the number of days between the date of hearing and the date of decision) from 100 to 61 days.

OPO ACCOMPLISHMENTS

Guidance and Information to
Federal Agencies

FSP continued to provide written guidance and procedures as well as advice and technical assistance to federal agencies on their EEO complaint processing and affirmative action matters. Presentations were made to 47 federal agencies by FSP staff on a broad range of federal EEO matters. In addition, in the interest of establishing more consistency in pre-complaint and complaint processing procedures, a handbook for EEO counselors was developed.

FSP obtained Commission approval for the following publications:

- Six-Year Trend Analyses of Federal Employment of Women, Minorities, and Individuals with Disabilities for FY 1982-FY 1987, two reports used by Congress and federal agencies to monitor and formulate hiring policies.
- A Handbook for Managers and Supervisors on the Employment of People with Disabilities in the Federal Government, a handbook and training guide designed to promote understanding of the systems used in hiring people with disabilities.
- Annual Report on the Employment of Minorities, Women and People with Disabilities in the Federal Government, Fiscal Year 1988, the seventh annual report on the federal employment status of minorities and women and on the federal work place environment for people with disabilities.
- Report on Pre-Complaint Counseling and Complaint Processing by Federal Agencies for Fiscal Year 1988, an annual report on the processing of complaints of discrimination in the federal government.

Federal Sector Complaints

According to data reported to FSP staff during FY 1989, federal employees filed 15,972 complaints in FY 1988, an increase of 0.3 percent over the year before. Federal agencies closed 17,844 complaints, an increase over FY 1987 of 4.9 percent. (See data summary table on page B.10.)

DETERMINATIONS REVIEW PROGRAM

The Determinations Review Program (DRP) allows charging parties/complainants to request a headquarters review of no reasonable cause determinations issued by EEOC field offices. DRP continued its high level of productivity in FY 1989, its second full year of operation. There was an increase in the ratio of no cause determination reviews resolved to those received from 63.6 percent to 86.9 percent. (See data summary chart on page B.6.)

During the year, DRP received 7,947 requests for reviews of field determinations. This was 22.1 percent of total no reasonable cause determinations issued during the same period. This represented a decrease of 7.6 percent from the 8,604 determinations submitted on appeal in FY 1988 (24.5 percent of the no reasonable cause determinations issued). Of the requests submitted this year, 63.0 percent involved Title VII charges, 34.0 percent ADEA and 3.0 percent EPA or concurrently filed charges involving all three statutes.

DRP resolved 6,907 no reasonable cause determinations, a 25.7 percent increase over the 5,495 cases resolved in FY 1988. Of these resolutions, 6,379 were decisions, and 99 percent (6,317) of the decisions sustained the field's no reasonable cause determination. Decisions reversed all or part of the remaining 56 field office determinations (1.0 percent of the decisions). Five hundred twenty-eight reviews were closed administratively (7.7 percent of total closures), through withdrawal, rejection, field office reevaluation, filing of suit, or settlement.

An additional 231 charge files (constituting 2.9 percent of FY 1989 DRP receipts) were remanded to the field offices for further investigation. Of these, 150 were closed by the end of the fiscal year and are included in the above decision figures.

PROGRAM SUPPORT SERVICES STAFF

The Program Support Services Staff (PSSS) acts to enhance the quality of the agency's charge processing and case and resource management. Specifically, PSSS designs, develops and delivers training, conducts special studies and assists field offices with planning and team building. As a result of reorganization, PSSS, formerly a part of the Office of Performance Services, has completed its first year as a part of OPO.

In FY 1989, the PSSS coordinated and delivered Case Development Training to 19 district office management teams and to the FEPA directors at their annual conference. This training was designed to reinforce case development and management principles established in FY 1988. Also, a comprehensive Training Resource Guide, which provides field staff with a cross-reference to available training materials, was developed. Other training projects were initiated including support for various FSP training efforts, such as the development of an EEO Counselors Handbook, development of a training video tape for EEOC investigators on "Similarly Situated Methodology", and the design of a basic supervisory training course.

A major effort to ensure commonality of approach by OPO components led to a review of the various OPO systems, the culmination of which was a report for OPO management called the "Review of Reviews". Other major studies conducted this year include comparative analyses of EEOC's SES evaluation system and that of 16 other federal agencies, a comparative analysis of the Department of Labor's Opportunity 2000 Report and EEOC's Project 2000 Report. These studies yield information useful to top management in formulating plans and strategies for implementation of new programs.

OPO ACCOMPLISHMENTS

OPERATIONS RESEARCH AND PLANNING PROGRAMS

The Operations Research and Planning Programs initiated its first year of operation following the merger between former Program Research Surveys Staff and the Performance Planning Division of the former Office of Performance Services. The program staff designs and conducts surveys of various employment sectors, analyzes field office performance and OPO headquarters activities, develops appropriate reports, and conducts research, studies and long range planning activities. ORPP accomplishments had a significant impact on field office operations, on the accuracy and validity of OPO performance data, on the identification of resources and staffing needs and on the development of goals and objectives.

OPO Management Information Data

Data base systems to support OPO operations were established, and during the year, the data base was expanded to provide reports covering numerous OPO activities in the field offices. These systems allow specific evaluation and assessment of performance in charge resolution activity and provide the basis for management's decision-making responsibility.

Staff also worked in coordination with Information Systems Services and Field Management Programs staffs to improve the validity and accuracy of data in the Charge Data System (CDS).

EEO Survey Data

Technical support for systemic programs was enhanced by the timely processing of EEOC surveys and developing the capability to down load current EEO-1 survey data from computer mainframes into mini-computer programs. This system also allows field staff to access EEO-1 employer data at the time a charge is filed.

Planning

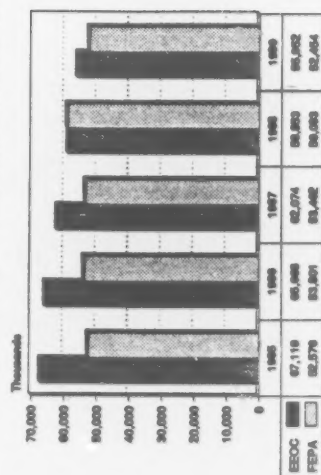
A CDS-based caseload planning model was designed which will automatically, through basic formulae, determine reasonable charge processing expectations for individual offices based on the number of available staff and projections of expected workload.

OPO ACCOMPLISHMENTS**Studies and Industry Analyses**

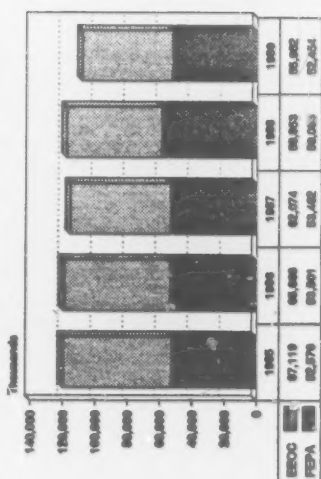
Studies were conducted during the year that added to the OPO information base on various aspects of EEOC field office performance as well as on private and public sector work force trends. Studies on the charge process, on management strategies and on the techniques investigators use in achieving maximum performance contributed to a better understanding of factors affecting field performance. Industrial analyses presented findings on work force distribution in the private and public sectors, in major industries, among large employers, and in foreign companies.

RECEIPTS TO PROCESS

RECEIPTS TO PROCESS BY AGENCY

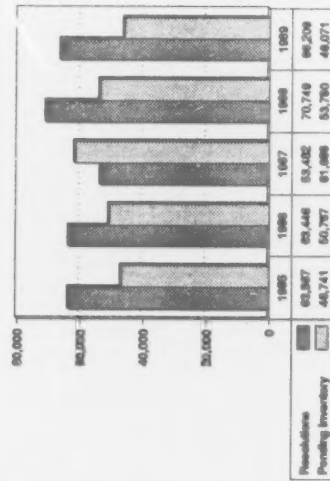


TOTAL RECEIPTS TO PROCESS

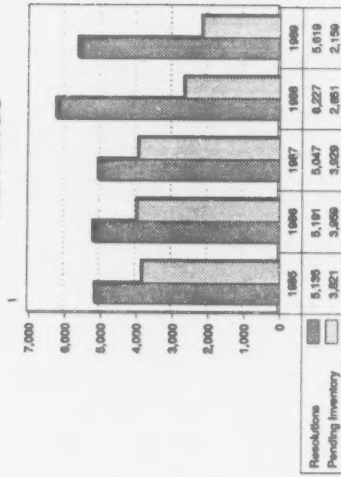


RESOLUTIONS AND PENDING INVENTORY

ENFORCEMENT

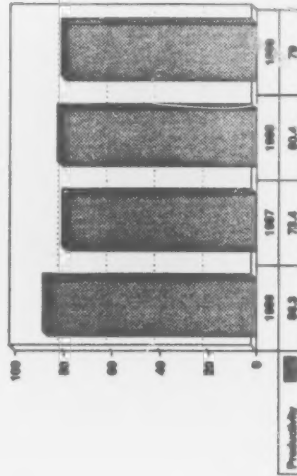


HEARINGS

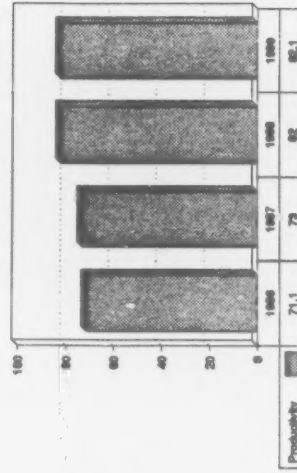


PRODUCTIVITY

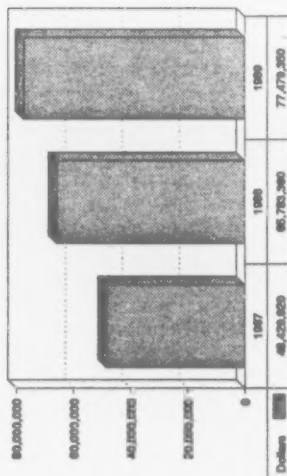
ENFORCEMENT Resolutions per Staff Investigator



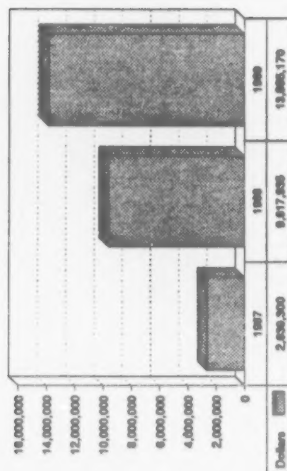
HEARINGS Closures per Administrative Judge



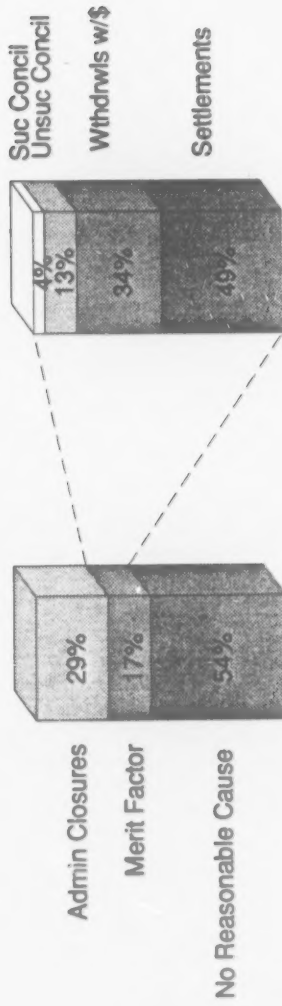
ENFORCEMENT
Charges Initiated by Charging Parties



SYSTEMIC
Charges Initiated by the EEOC

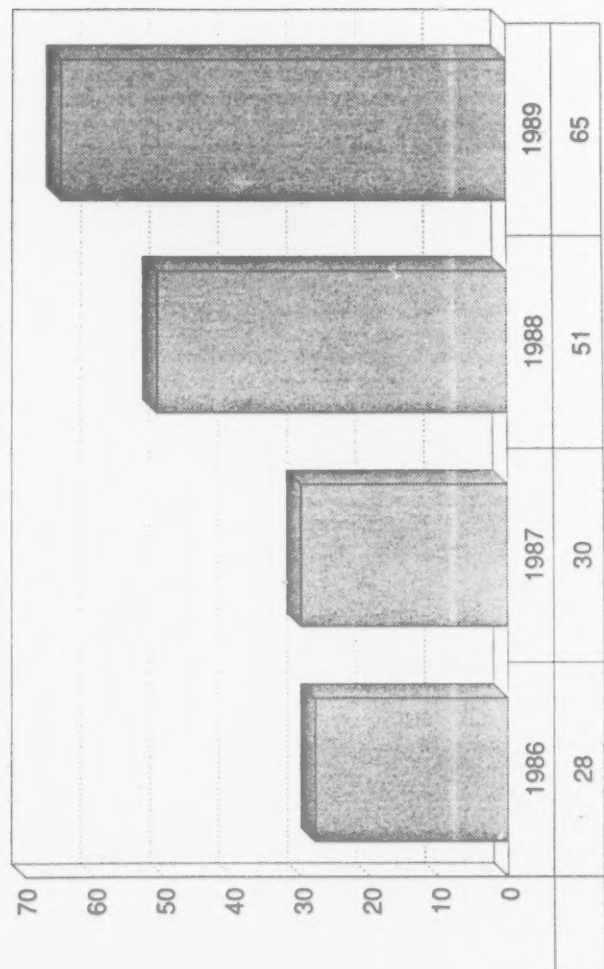


RESOLUTIONS BY TYPE

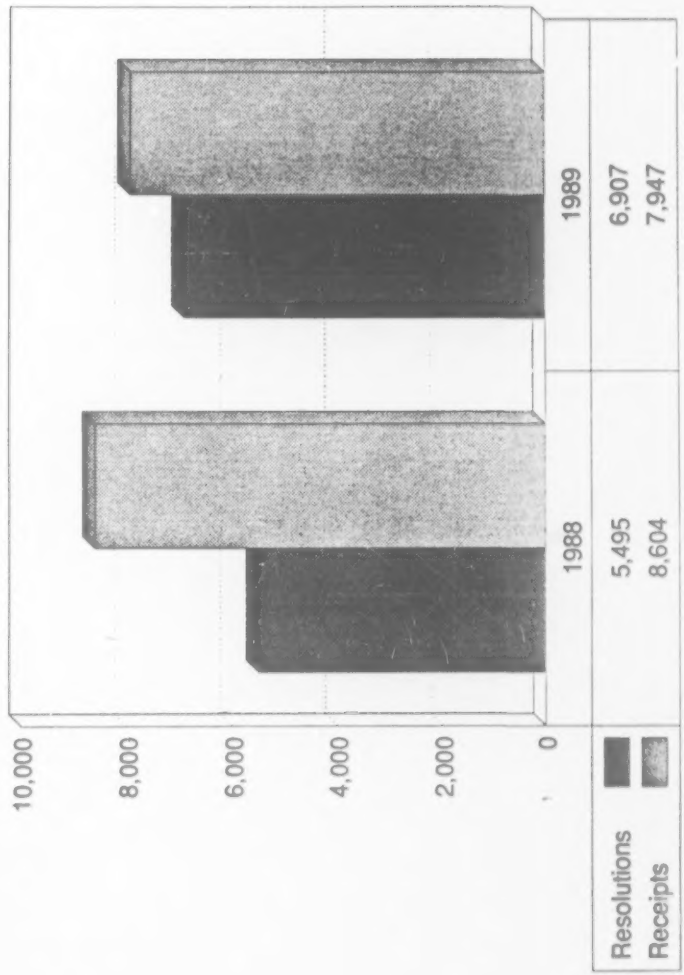


SYSTEMIC CASE ACTIONS

Approvals by Commission Vote



DRP RESOLUTIONS AGAINST RECEIPTS



DATA SUMMARY TABLES

EEOC/FEPA RECEIPTS TO PROCESS

RECEIPTS TO PROCESS	FISCAL YEAR 1985			FISCAL YEAR 1986			FISCAL YEAR 1987			FISCAL YEAR 1988			FISCAL YEAR 1989		
	TOTAL	PERCENT	CHANGE 84-85	TOTAL	PERCENT	CHANGE 85-86	TOTAL	PERCENT	CHANGE 86-87	TOTAL	PERCENT	CHANGE 87-88	TOTAL	PERCENT	CHANGE 88-89
TOTAL	119,695	100%	3.5%	119,467	100%	-0.2%	115,536	100%	-3.3%	117,936	100%	2.1%	108,406	100%	-8.1%
EEOC	67,119	56%	1.3%	65,666	55%	-2.2%	62,076	54%	-5.5%	59,853	50%	-5.2%	55,952	51%	-6.9%
FEPA	52,576	44%	6.4%	53,801	45%	2.3%	53,462	46%	-0.6%	59,083	50%	10.5%	52,454	49%	-11.2%

EEOC RECEIPTS TO PROCESS BY STATUTE

INDICATOR	FY 85	% TOTAL	FY 86	% TOTAL	FY 87	% TOTAL	FY 88	% TOTAL	FY 89	% TOTAL
RECEIPTS TO PROCESS	67,119	100.0%	65,666	100.0%	62,076	100.0%	59,853	100.0%	55,952	100.0%
TITLE VII	49,728	74.1%	47,812	72.8%	45,401	73.1%	42,657	72.5%	39,975	71.4%
ADEA	15,646	23.3%	16,643	25.3%	15,121	24.4%	14,882	25.3%	14,789	26.4%
EPA	1,745	2.6%	1,211	1.8%	1,267	2.0%	1,155	2.0%	1,075	1.9%
OTHER	0	0.0%	0	0.0%	285	0.5%	159	0.3%	113	0.2%

Percent totals may not always equal 100% due to rounding.

DATA SUMMARY TABLES

MERIT RESOLUTIONS BY TYPE

MERIT RESOLUTIONS BY TYPE	FISCAL YEAR 1985			FISCAL YEAR 1986			FISCAL YEAR 1987			FISCAL YEAR 1988			FISCAL YEAR 1989		
	TOTAL	PERCENT	CHANGE 84-85	TOTAL	PERCENT	CHANGE 85-86	TOTAL	PERCENT	CHANGE 86-87	TOTAL	PERCENT	CHANGE 87-88	TOTAL	PERCENT	CHANGE 88-89
MERIT RESOLUTIONS	10,935	17.2%	-19.5%	9,613	15.2%	-12.1%	8,114	15.2%	-15.6%	10,641	15.0%	31.1%	11,156	16.6%	4.8%
BETTERMENT*	5,726	9.0%	-21.6%	4,601	7.3%	-19.6%	3,715	6.9%	-19.3%	4,750	6.7%	27.9%	5,420	8.2%	14.1%
WITNESSES WITH BENEFITS**	3,258	5.1%	-21.6%	3,149	5.0%	-3.3%	2,987	5.6%	-5.1%	3,953	5.6%	32.3%	3,795	5.7%	-4.0%
UNSUCCESSFUL CONCILIATIONS	1,621	2.6%	1.1%	1,348	2.2%	-15.6%	1,036	1.9%	-24.3%	1,512	2.1%	45.9%	1,450	2.2%	-4.1%
SUCCESSFUL CONCILIATIONS	332	0.5%	-36.8%	495	0.8%	49.1%	376	0.7%	-24.0%	626	0.6%	13.3%	691	0.7%	15.3%
TOTAL RESOLUTIONS	63,567	15.5%		63,446		-0.2%	53,482		-15.7%	70,749		32.3%	66,209		-6.4%

DATA SUMMARY TABLES

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RESOLUTIONS BY TYPE

RESOLUTIONS BY TYPE	FISCAL YEAR 1985			FISCAL YEAR 1986			FISCAL YEAR 1987			FISCAL YEAR 1988			FISCAL YEAR 1989		
	TOTAL	PERCENT	CHANGE 84-85	TOTAL	PERCENT	CHANGE 85-86	TOTAL	PERCENT	CHANGE 86-87	TOTAL	PERCENT	CHANGE 87-88	TOTAL	PERCENT	CHANGE 88-89
TOTAL RESOLUTIONS	63,567	100.0%	15.3%	63,446	100.0%	-0.2%	53,482	100.0%	-15.7%	70,749	100.0%	32.3%	66,209	100.0%	-6.4%
HERIT RESOLUTIONS	10,935	17.2%	-19.5%	9,613	15.2%	-12.1%	8,116	15.2%	-15.6%	10,641	15.0%	31.1%	11,156	16.8%	4.8%
SETTLEMENTS*	5,724	9.0%	-21.6%	4,601	7.3%	-19.6%	3,715	6.9%	-19.3%	4,750	6.7%	27.9%	5,420	8.2%	14.1%
WITNESS WITH BENEFITS*	3,258	5.1%	-21.6%	3,149	5.0%	-3.3%	2,907	5.6%	-5.1%	3,953	5.6%	32.3%	3,795	5.7%	-4.0%
UNSUCCESSFUL CONCILIATIONS	1,421	2.6%	1.1%	1,368	2.2%	-15.6%	1,036	1.9%	-24.3%	1,512	2.1%	45.9%	1,650	2.2%	4.1%
SUCCESSFUL CONCILIATIONS	332	0.5%	-36.8%	495	0.8%	49.1%	376	0.7%	-24.0%	426	0.6%	13.3%	691	0.7%	15.3%
NO REASONABLE CAUSE	35,139	55.3%	36.9%	37,014	58.3%	5.3%	29,378	55.3%	-20.1%	35,148	49.7%	18.0%	35,896	54.2%	2.1%
ADMINISTRATIVE CLOSURES	16,421	25.8%	4.1%	15,576	24.6%	-5.1%	15,790	29.5%	1.4%	26,960	35.3%	58.1%	19,157	28.9%	-23.2%
INTAKE	1,073	1.7%	NA	1,243	2.0%	15.8%	0	0.0%	-100.0%	0	0.0%	0.0%	0	0.0%	0.0%

Percent totals may not always equal 100% due to rounding.

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DATA SUMMARY TABLES

RESOLUTIONS BY STATUTE

INDICATOR	FY 85	% TOTAL	FY 86	% TOTAL	FY 87	% TOTAL	FY 88	% TOTAL	FY 89	% TOTAL
TOTAL RESOLUTIONS	63,567	100.0%	63,446	100.0%	53,482	100.0%	70,749	100.0%	66,209	100.0%
TITLE VII										
ADFA	46,436	73.1%	45,506	71.7%	37,691	70.5%	49,699	70.2%	47,621	71.9%
EPA	16,437	22.7%	16,933	23.5%	16,530	27.2%	19,427	27.5%	16,989	25.7%
OTHER	1,516	2.4%	1,630	2.6%	1,122	2.1%	1,446	2.1%	1,654	2.2%
INTAKE	105	0.2%	134	0.2%	139	0.3%	161	0.2%	165	0.2%
	1,073	1.7%	1,263	2.0%	0	0.0%	0	0.0%	0	0.0%

EEOC RECEIPTS TO PROCESS, RESOLUTIONS, PENDING INVENTORY

INDICATOR	FY 85	% CHANGE FY 84-85	FY 86	% CHANGE FY 85-86	FY 87	% CHANGE FY 86-87	FY 88	% CHANGE FY 87-88	FY 89	% CHANGE FY 88-89
RECEIPTS TO PROCESS	67,119	1.3%	65,666	-2.2%	62,074	-5.5%	50,853	-5.2%	55,952	-4.9%
TOTAL RESOLUTIONS	63,567	15.5%	63,446	-0.2%	53,482	-15.7%	70,749	32.3%	66,209	-6.4%
PENDING INVENTORY	46,741	17.2%	50,767	8.6%	61,686	21.5%	53,780	-12.8%	46,071	-16.3%

Percent table may not always equal 100% due to rounding.

DATA SUMMARY TABLES

RESOLUTIONS BY TYPE

(For comparison to previous years,
see Data Summary Table page B.4.)

INDICATOR	NUMBER	% TOTAL
TOTAL RESOLUTIONS	66,209	100.0%
SETTLEMENTS	5,420	8.2%
WITTHOLDS W/BENEFITS	3,795	5.7%
SUCCESS CONCIL CAUSE	691	0.7%
UNSUCCESS CONCIL	1,650	2.2%
NO REASONABLE CAUSE	35,896	54.2%
ADMINISTRATIVE CLOSURES	19,157	28.9%

DETERMINATIONS ON MERIT

INDICATOR	FY 85	% CHANGE FY 84-85	FY 86	% CHANGE FY 85-86	FY 87	% CHANGE FY 86-87	FY 88	% CHANGE FY 87-88	FY 89	% CHANGE FY 88-89
DETERMINATIONS ON MERITS	37,092	33.4%	38,877	4.8%	39,990	-20.3%	37,066	19.7%	37,837	2.0%
CAUSE	1,953	-8.2%	1,863	-4.6%	1,412	-24.2%	1,958	37.3%	1,941	-0.2%
NO REASONABLE CAUSE	35,139	34.9%	37,014	5.3%	29,578	-20.1%	35,118	18.8%	35,896	2.1%

Percent table may not always equal 100% due to rounding.

DATA SUMMARY TABLES

DETERMINATIONS REVIEW PROGRAM RECEIPTS AND CLOSURES

INDICATOR	1986	1989	CHANGE 86-89
RECEIPTS	8,604	7,947	-7.6%
RESOLUTIONS	5,495	6,907	25.7%

INVESTIGATOR PRODUCTIVITY

INDICATOR	% CHANGE		% CHANGE		% CHANGE		% CHANGE	
	FY 86	FY 85-86	FY 87	FY 86-87	FY 88	FY 87-88	FY 89	FY 88-89
RESOLUTIONS PER INVESTIGATOR	86.3	2.0%	79.4	-9.2%	80.4	2.6%	79.0	-1.7%

SYSTEMIC CASE ACTIONS

INDICATOR	% CHANGE		% CHANGE		% CHANGE	
	FY 86	FY 85-86	FY 87	FY 86-87	FY 88	FY 87-88
TOTAL ACTIONS	28	NA	30	7.1%	51	70.0%
						65
						27.5%

DATA SUMMARY TABLES

LITIGATION RECOMMENDATIONS, LITIGATION AUTHORIZED, SUITS FILED

INDICATOR	% CHANGE		% CHANGE		% CHANGE		% CHANGE		% CHANGE	
	FY 85	FY 86-85	FY 86	FY 85-86	FY 87	FY 86-87	FY 88	FY 87-88	FY 89	FY 88-89
LITIGATION RECOMMENDATIONS	708	156.5%	701	-1.0%	557	-20.5%	764	37.2%	904	16.3%
LITIGATION AUTHORIZED	277	35.8%	440	58.8%	436	-0.9%	482	10.6%	482	0.0%
SUITS FILED	411	32.6%	526	28.0%	527	0.2%	555	5.3%	599	7.9%

Data Sources: L.R. RecOGC; L.R. Auth/Exec Sec.; Suits FiledOGC

ENFORCEMENT MONETARY BENEFITS AND TOTAL PEOPLE BENEFITTED

INDICATOR	% CHANGE		% CHANGE		% CHANGE		% CHANGE		% CHANGE	
	FY 85	FY 86-85	FY 86	FY 85-86	FY 87	FY 86-87	FY 88	FY 87-88	FY 89	FY 88-89
TOTAL MONETARY BENEFITS	\$78,994,000	-26.2%	\$53,516,000	-32.3%	\$48,430,000	-9.5%	\$45,783,000	35.8%	\$77,478,000	17.8%
PEOPLE BENEFITTED MONETARILY	12,480	-51.2%	12,889	3.3%	5,500	-57.3%	8,667	57.6%	12,187	40.6%

DATA SUMMARY TABLES

TOTAL MONETARY BENEFITS

INDICATOR	FY 86	% CHANGE FY 85-86	FY 87	% CHANGE FY 86-87	FY 88	% CHANGE FY 87-88	FY 89	% CHANGE FY 88-89
TOTAL MONETARY BENEFITS	\$54,020,000	-31.6%	\$51,069,000	-5.5%	\$75,401,000	47.6%	\$91,363,000	21.2%
ENFORCEMENT	\$53,516,000	-32.3%	\$48,430,000	-9.5%	\$65,783,000	35.6%	\$77,478,000	17.8%
SYSTEMIC	\$504,000	N/A	\$2,639,000	423.6%	\$9,618,000	264.5%	\$13,885,000	44.5%

DATA SUMMARY TABLES

FEDERAL HEARINGS RECEIPTS, RESOLUTIONS, PENDING INVENTORY

INDICATOR	FY 85		FY 86		FY 85-86		FY 87		FY 86-87		FY 88		FY 87-88		FY 89		FY 88-89	
		% CHANGE		% CHANGE		% CHANGE		% CHANGE		% CHANGE		% CHANGE		% CHANGE		% CHANGE		% CHANGE
RECEIPTS	5,123	2.6%	5,258	2.6%			5,045	-4.1%	5,276	4.6%	5,185	-1.8%						
RESOLUTIONS	5,135	4.2%	5,191	1.1%			5,047	-2.8%	6,227	23.4%	5,619	-9.8%						
INVENTORY	3,821	0.3%	3,959	3.6%			3,929	-0.8%	2,651	-32.3%	2,159	-19.4%						

HEARINGS ANNUAL RESOLUTIONS BY TYPE

RESOLUTION TYPES	FY 85		FY 86		FY 87		FY 88		FY 89		FY 90		FY 91		FY 92		FY 93	
		% TOTAL		% TOTAL		% TOTAL		% TOTAL		% TOTAL		% TOTAL		% TOTAL		% TOTAL		% TOTAL
TOTAL RESOLUTIONS	5,135	100.0%	5,191	100.0%	5,047	100.0%	6,227	100.0%	5,619	100.0%								
RECOMMENDED DECISIONS	1,876	36.5%	1,916	36.9%	1,707	33.8%	2,222	35.7%	2,216	39.4%								
SETTLEMENTS	1,551	30.2%	1,425	27.4%	1,453	28.8%	1,885	30.3%	1,565	27.9%								
WITHDRAWALS	751	14.6%	742	14.3%	795	15.8%	926	14.9%	726	12.9%								
REMARKS	843	16.4%	1,016	19.6%	1,008	20.0%	1,052	16.9%	908	17.4%								
CLASS	116	2.3%	94	1.8%	84	1.7%	162	2.3%	128	2.3%								

Percent totals may not always equal 100% due to rounding.

DATA SUMMARY TABLES

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HEARINGS PRODUCTIVITY

INDICATOR	% CHANGE		% CHANGE		% CHANGE		% CHANGE		% CHANGE	
	FY 85	FY 84-85	FY 86	FY 85-86	FY 87	FY 86-87	FY 88	FY 87-88	FY 89	FY 88-89
RESOLUTIONS PER ADMINISTRATIVE ADJUD	69.4	-3.6%	71.1	2.4%	73.0	2.7%	82.0	12.3%	82.1	0.1%

FEDERAL COMPLAINTS RECEIPTS, RESOLUTIONS, PENDING INVENTORY

INDICATOR	% CHANGE		% CHANGE		% CHANGE		% CHANGE		% CHANGE	
	FY 85	FY 84-85	FY 86	FY 85-86	FY 87	FY 86-87	FY 88	FY 87-88	FY 89	FY 88-89
RECEIPTS	19,306	8.2%	18,167	-6.3%	15,931	-12.3%	15,972	0.3%		
CLOSURES	16,337	7.6%	17,962	-2.0%	17,014	-5.3%	17,844	4.9%		
PENDING	19,051	9.7%	19,050	-0.1%	18,221	-4.3%	16,421	-9.9%		

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DATA SUMMARY TABLES

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FEDERAL COMPLAINTS RESOLUTIONS BY TYPE

INDICATOR	FY 85 \$ TOTAL	FY 86 \$ TOTAL	FY 87 \$ TOTAL	FY 88 \$ TOTAL
TOTAL RESOLUTIONS	18,337 100.0%	17,962 100.0%	17,016 100.0%	17,864 100.0%
REJECTIONS	2,494 13.6%	2,572 14.3%	2,668 15.7%	3,178 17.8%
CANCELLATIONS	1,619 8.8%	1,701 9.5%	1,575 9.3%	1,768 9.9%
WITHDRAWALS	3,431 18.7%	3,057 17.0%	3,519 20.7%	2,758 15.5%
SETTLEMENTS	5,767 31.3%	5,656 30.4%	6,828 28.4%	5,346 30.0%
AGENCY DECISIONS	5,066 27.5%	5,176 28.8%	6,426 26.0%	4,794 26.9%

Percent totals may not always equal 100% due to rounding.

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ITEM 19. FEDERAL COMMUNICATIONS COMMISSION

DECEMBER 11, 1990.

DEAR CHAIRMAN PRYOR: Thank you your letter of September 24, 1990, requesting a summary of actions affecting the elderly taken by the Federal Communications Commission during fiscal year 1990. I understand that this summary will be included in your publication, *Developments in Aging*.

As you will note from the attached summary, the Federal Communications Commission has taken a number of actions during the past year which will positively affect the elderly. The Commission is currently developing regulations to implement a nationwide telephone relay service for the hearing and speech-impaired as required by the Americans with Disabilities Act (ADA) which recently became law. This relay service will assist the elderly speech and hearing-impaired in telephone communication.

Further, the Commission is also developing regulations to require all television sets made or imported in this country to contain decoder circuitry. It is expected that this circuitry, required by the Television Decoded Circuitry Act of 1990, will be used by many elderly persons who would not otherwise incur the costs of buying a decoding device.

The Commission has also worked with States and telephone companies to assist low-income persons, including the elderly, in affording telephone service. The assistance has come in the form of a telephone connection assistance program known as "lifeline."

Finally, the Federal Communications Commission Authorization Act of 1990 allows this agency to employ older Americans and thereby make use of one of this country's significant human resources.

The Federal Communications Commission will continue to work to make the lives of our Nation's elderly easier and more fulfilling through the use of telecommunications. Thank you for providing us this opportunity to report on our activities affecting the elderly.

Sincerely,

ALFRED C. SIKES,
Chairman.

SUMMARY OF FEDERAL COMMUNICATIONS COMMISSION ACTIVITIES AFFECTING THE ELDERLY

The Federal Communications Commission has engaged in a number of activities which should positively affect America's elderly.

First, the Commission has been working with Congress and the Administration to implement legislation to ensure that speech and hearing-impaired persons, including the elderly, have reasonable access to the telephone network.

The Commission, for example, issued a Notice of Proposed Rulemaking on November 16, 1990, which proposed operating rules for Telecommunications for the Deaf (TDD) relays as required by the Americans with Disabilities Act (ADA) of 1990. The ADA, (P.L. 101-336) was signed into law on July 26, 1990. In general, the proposed rules require that TDD users be accorded the same service and quality of service that a hearing person has available. It included a program for certification of existing State programs by the FCC, proposed minimum standards for the qualifications of relay operators, and required operation of TDD relay service 24 hours a day, 7 days a week. Relay operators may not refuse calls, reveal contents of calls, or intentionally alter calls. A State program may be decertified if, after investigation of a complaint, it is found to be deficient in meeting minimum Federal standards for TDD relay service.

During fiscal year 1990, the Commission continued to examine handicapped access issues raised earlier. For example, on June 7, 1990, the Commission issued a Memorandum Opinion and Order which reconsidered and broadened the definition of "essential telephones," which must be hearing and compatible by May 1, 1991, and released a Notice of Proposed Rulemaking (NPRM) which proposed to extend the number of telephones affected by the retrofitting requirement even further. These regulatory efforts were mandated by passage of the Hearing Aid Compatibility Act of 1988, Public Law 100-394, on August 17, 1988. This law requires most telephones manufactured in or imported into the United States more than 1 year after its enactment to be hearing aid compatible.

On October 28, 1988, the President signed the Telecommunications Accessibility Enhancement Act of 1988, Public Law 100-452. This law requires the General Services Administration to take action as necessary to assure that the Federal telecommunications system is fully accessible to the hearing and speech-impaired popula-

tions and directs the Commission to complete its interstate TDD relay system inquiry, CC Docket No. 87-124, within 9 months of enactment of the law.

The Commission is also currently drafting a NPRM required by the Television Decoder Circuitry Act of 1990, Public Law No. 101-434, signed October 15, 1990. These regulations will require that all television sets made or imported into the United States having a 13-inch or larger screen to have build in closed-caption recording circuitry.

The Federal Communications Commission Authorization Act of 1990, Public Law 101-396, signed September 28, 1990, extends the Commission's authority to participate in the Older Americans Program. This program allows the FCC sign an agreement with organizations representing older Americans to provide elderly employees for the agency.

Finally, the FCC has taken several steps in the subscriber line charge proceeding, based on the recommendations of an advisory group of Federal and State regulators, to assist low and fixed income telephone subscribers. These measures include high cost assistance designed to keep local exchange rates lower than they otherwise would be in certain parts of the Nation.

The Commission also has implemented a Federal lifeline program to reduce telephone charges for low income subscribers. Under this program, local telephone companies are able to waive the subscriber line charge for low income subscribers qualifying under specified state assistance programs when the state makes an equal monetary contribution to reduce local exchange rates for these customers. Based on the current \$3.50 subscriber line charge, qualifying subscribers can receive up to a total of \$7 per month in assistance for qualifying.

On April 16, 1987, the Commission also introduced a connection assistance program called "Link-up America," which provides a discount of 50 percent—up to \$30—for connection charges to low income households seeking telephone service. The FCC estimates that approximately 3 million low income households, including many elderly, will be eligible for assistance under the program. In addition, telephone companies are encouraged to offer interest-free deferred payment schedules on the remaining balance and, where appropriate, to reduce or to waive any deposit that may be required.

The lifeline assistance program is funded through usage-based charges paid by the long distance companies. To date, local telephone companies in 30 States and the District of Columbia have federally approved lifeline programs, and local telephone companies in 47 States, the District of Columbia and Puerto Rico have federally approved connection assistance programs. Most of the Bell Telephone companies also offer budget rate measured service with a very low flat monthly charge for basic service with additional usage-based charges.

Further, as a result of the Commission's subscriber line charge (SLC) program and other actions, direct dial interstate toll rates have dropped approximately 40 percent since May 1984. A January 1989 study by Southwestern Bell further demonstrates the value of these rate reductions to the elderly. The study shows that senior citizens have increased their long distance usage 92.6 percent since 1983 (before SLCs were in effect). This is well above the average residential subscribers usage increase of 72.2 percent.

In addition, the Commission's Industry Analysis Division continues to monitor telephone penetration rates for the elderly as well as other segments of the population. Census Bureau data collected at the request of the FCC show that telephone subscribership has increased or remained stable since divestiture, even in the case of the unemployed and those with extremely low income levels. In fact, the Census Bureau data for July 1990 (the most recent information currently available) show that 93.3 percent of American households have telephone service in their homes compared to 91.4 percent in November 1983, just prior to divestiture.

The elderly in all income brackets have telephone subscribership levels that are significantly higher than those for households headed by younger people. The July 1990 census data indicated that 96 percent of households headed by a person between 60 and 64 years of age has a telephone at home compared to a 93.3 percent subscribership level for all households. Based on the July 1990 census data, 96 percent of households headed by someone between the ages of 65 and 69 subscribed to telephone service, while households headed by someone from 70 to 99 years of age had a subscribership rate of 97.1 percent. Subscribership levels for these groups have increased or remained stable since divestiture.

ITEM 20. FEDERAL TRADE COMMISSION

DECEMBER 17, 1990.

DEAR MR. CHAIRMAN: In response to your letter of September 24, 1990, I am pleased to forward the annual staff summary of Federal Trade Commission activities affecting older Americans for the fiscal year 1990. As this summary indicates, many of the Commission's efforts to police the market for unfair or deceptive practices and to promote a competitive market are particularly significant for older consumers.

I hope this information will be helpful to the Committee. Please let me know if we can provide any further assistance.

By direction of the Commission.

JANET D. STEIGER,
Chairman.

Enclosure.

STAFF SUMMARY OF FEDERAL TRADE COMMISSION ACTIVITIES AFFECTING OLDER AMERICANS

This report discusses activities of the Federal Trade Commission during fiscal year 1990 on behalf of older Americans. The first section of the report describes the Commission's health-related activities, which are of particular importance to older Americans because persons over age 65 spend almost three times as much per capita on health care as do other adults (Part I). The second section addresses a variety of non-health-related issues that are of significant interest to older Americans. These include the mandatory review and enforcement of the Commission's Funeral Rule, enforcement of the Commission's Mail Order, R-Value, and Cooling-Off Rules, investigations into the delivery of legal services, issues surrounding credit, investment and travel frauds, and activities in the real estate, financial services, and grocery industries (Part II). The final section describes the Commission's consumer education activities that are of special significance to older Americans (Part III).

I. HEALTH-RELATED ACTIVITIES

HOSPITAL SERVICES

The Bureau of Economics has undertaken a study of hospital merger policies in order to assist in the development of an effective antitrust policy toward hospital markets generally and hospital mergers in particular. The study examines the vast literature in health care economics in order to apply the latest empirical and theoretical findings to health care antitrust issues. This study is under review.

The Commission also investigates potentially anticompetitive mergers or proposed mergers among hospitals. In November 1989, the Commission issued an administrative complaint challenging the merger of two hospitals in Ukiah, CA. The transaction gave one company control of three of the five general acute care hospitals in the area. According to the complaint, this acquisition may injure consumers by giving the firm a dominant position in the market and by increasing the likelihood of collusion among the hospitals in the area. This case is still in litigation.

In another case, the Commission accepted a consent order settling a challenge to the merger of two of the three general hospitals in Reading, PA. The Commission's complaint charged that the merger had created a substantial danger of higher prices or a lower quality of medical and surgical care. The hospitals rescinded their merger shortly after the Commission's staff completed its investigation, and agreed not to engage in any other mergers in the metropolitan area without the Commission's approval.

The Commission staff examined another hospital merger in connection with a general review of its merger policy. During the past year, the staff has taken a sample of mergers that were allowed to proceed without challenge, and has studied the effects that the mergers actually had on competition and consumers in the relevant markets. The purpose of this exercise is to ensure that there are not any systematic flaws in the agency's mode of analysis. One of the acquisitions studied involved two hospitals in a western state. The review found that this merger had no discernible anticompetitive effects.

NURSING HOMES

Currently about 23,000 nursing homes provide care to approximately 1.4 million older Americans in the United States. In 1988, the Commission's staff opened a project to improve liaison efforts with nursing home ombudsmen, State attorneys

general, and other interested parties. The staff continues to maintain regular contracts with these people to determine whether any matter may be appropriate for investigation.

The Commission also watches for mergers and acquisitions that could lead to price increases or have other anticompetitive effects. During the course of one Commission investigation last year, two nursing home chains decided to change their merger plans so that one of the seller's nursing homes, only a few miles from one of the buyer's nursing homes and with few other nearby competitors, would remain under separate ownership and management.

HOME HEALTH CARE

Older Americans make greater use of health care facilities, including hospitals, than other segments of the population. Thus, as a group, they stand to benefit more from effective competition among health care providers.

Home health care agencies, which offer skilled nursing and other health services to patients in their homes, can provide some older Americans with an important alternative to hospitalization or nursing home care. Home health services offer the possibility of reduced health care expenses and can enable some people who would otherwise require institutional care to remain at home.

One of the key components of effective home health care is the durable medical equipment necessary for the patient to be able to receive care at home instead of in a hospital. The Commission is presently investigating allegations of exclusionary conduct in the market for such equipment.

PRESCRIPTION DRUGS

Although persons aged 65 and over comprise only about 12 percent of the population, they consume over 30 percent of all prescription drugs nationwide. Consequently, savings on prescription drug purchases are especially significant for older Americans.

One way of keeping medicines affordable is to ensure that, insofar as possible, each drug is produced by several competing manufacturers. To this end the Commission staff monitors mergers and acquisitions in the pharmaceutical industry and challenges those that appear to be anticompetitive. In the past year the staff obtained consent orders covering four such acquisitions. These orders generally required divestiture of an overlapping product line, or sometimes called for licensing to any new firm that wished to begin manufacturing. The products involved in these acquisitions included brain perfusion imaging agents used in diagnosing strokes, barium sulfate products used in gastrointestinal diagnosis, rabies vaccine, human growth hormone, vitamin C, and interleukin.

In fiscal year 1990, the Commission also accepted almost a dozen consent agreements settling charges that pharmacy firms and associations had engaged in a boycott of a New York State health care plan that provided pharmacy benefits to State employees, both current and retired. The Commission's complaint alleged that the boycott was aimed at forcing the State to increase the plan's payments to pharmacies, which would raise the State's health care costs. Administrative litigation is continuing against the one remaining pharmacy chain that has not settled.

The Commission is conducting two investigations into allegations that pharmacies and pharmacy associations have similarly boycotted payors in two other States in attempts to secure higher fees.

In November 1989, the Commission staff commented to the Virginia Board of Pharmacy concerning proposed regulations governing the dispensing and sale of prescription drugs by physicians. The comments pointed out that consumers are likely to benefit if both physicians and pharmacists could sell prescription drugs.

In June 1990, the Commission staff commented on proposed legislation in Pennsylvania that was intended to provide consumers greater freedom to choose where they obtain pharmacy services covered by health insurance policies or employee benefit plans. The comment pointed out that the proposed legislation could have the unintended effect of denying consumers the benefits of certain cost-reducing arrangements in the provision of pharmaceutical services.

VISION CARE

As prescribed by its Eyeglasses I Trade Regulation Rule, which became effective in 1978, the Commission continues to require that optometrists and ophthalmologists give consumers copies of their prescriptions after an eye examination, thereby enabling consumers to comparison-shop for eyeglasses.

In March 1989, the Commission promulgated a Trade Regulation Rule that would invalidate four types of State restrictions imposed on the commercial practice of optometry: (1) prohibitions on certain forms of lay association or control over optometric practices; (2) limitations on the number of branch offices that optometrists may own or operate; (3) prohibitions on the practice of optometry in commercial locations; and (4) prohibitions on the practice of optometry under a nondeceptive trade name (Eyeglasses II Rule). The Commission found that these restrictions harm consumers by raising prices to consumers and decreasing their access to vision care. The removal of these restrictions would stimulate competition in the vision care industry and allow consumers to purchase vision care goods and services at lower prices without any compromise in the quality of care that consumers receive. The effective date of the Rule was stayed pending appeal¹.

In August 1990, the Court of Appeals for the District of Columbia Circuit vacated the Rule. The court found that the Commission lacked the statutory authority to promulgate the Rule because Congress did not authorize the Commission to regulate the sovereign acts of the States. In October 1990, the Commission petitioned the court for a rehearing of this decision.

The Commission staff also is engaged in discussions with a State board composed of vision care professionals concerning State restraints on the types of locations where such professionals can provide their services.

PHYSICIAN SERVICES

In November 1989, the Commission issued a consent order settling charges that a doctor in Sioux Falls, SD, illegally attempted to eliminate or limit competition among faculty members by conspiring with other doctors to boycott the gynecologist residency program of the University of South Dakota School of Medicine. Eleven other doctors in the area had entered into consent agreements settling similar charges in 1988.

In June 1990, the Commission issued a consent order which prohibited a physician from tying the use of his outpatient kidney dialysis facilities with his in-patient dialysis facilities. The complaint charged that the physician had required patients to use both of his facilities if they wished to use either one. The physician had allegedly used this arrangement in order to circumvent Medicare price regulation and charge higher than competitive prices for the tied in-patient services.

During the past year the Commission staff also worked cooperatively with the Colorado Attorney General to investigate a group of Colorado doctors who claimed, inappropriately, to be a union for the purpose of setting agreed-upon prices among themselves. The doctors eventually entered into a consent agreement with the State of Colorado.

During the year, the staff conducted several preliminary investigations of situations in which doctors are alleged to have organized boycotts in order to reduce competition and enhance their income.

RESTRAINTS ON ADVERTISING BY HEALTH CARE PROFESSIONALS

Advertising by professionals in general, and by health care providers in particular, has grown tremendously since the mid-1970's. The Commission supports the right of professionals to advertise truthfully. However, the Commission also recognizes the importance of ensuring that health care professionals do not engage in deceptive or misleading advertising practices.

The Commission staff works closely with professional health care organizations to help them develop ethical codes that protect against deceptive advertising without infringing on the rights of professionals to advertise truthfully. In September 1990, the Commission staff issued an advisory opinion concerning the advertising guidelines of a professional society representing over 5,000 ophthalmologists specializing in the extraction of cataracts and the implantation of intraocular lenses. Older Americans would be particularly benefited by truthful and competitive advertising in this field because they are the primary users of cataract surgery.

In fiscal year 1990, the Commission continued its cooperative efforts with professional groups regarding allegations of deceptive advertising in a number of health care fields. During this year, the Commission staff initiated several investigations involving possible deceptive claims in advertising of health care services and also expanded its efforts to work cooperatively with State medical boards in their efforts to prevent deceptive advertising.

Finally, the Commission staff commented in April 1990 to the Tennessee Division of Audit concerning the possible restrictive or anticompetitive effects of statutes governing various regulatory commissions including seven that regulate the health

profession: the Boards of Chiropractic Examiners, Dentistry, Dispensing Opticians, Examiners in Psychology, Optometry, Osteopathic Examiners, and Registration in Podiatry. The comment observed that several provisions of the authorizing statutes appeared to restrict a number of forms of commercial practice by professional licensees. Other provisions appeared to restrict various types of truthful, nondeceptive advertising, including price advertising, and solicitation by licensed professionals, or appeared to restrict the provision of health-related services and products by nontraditional providers. The comment concluded that some of these restrictions could have anticompetitive effects that might decrease services and increase prices to consumers.

These activities permit older Americans and others to obtain truthful information about health professionals' prices, services, and qualifications and to receive the benefits of price and service competition among health professionals, while allowing reasonable advertising guidelines that protect the public from false or deceptive advertising.

FOOD AND HEALTH CARE ADVERTISING

Older Americans spend considerably more per capita on health care than do other adults. An important part of the Commission's effort to protect the public from deceptive food, drug, and health care claims is its advertising monitoring program. In addition, the Commission's ongoing contacts with other Federal and State officials have helped identify potential targets and projects. During 1990, the Commission has taken action with respect to advertisements for foods and for drugs.

i. Food and Food Supplement Advertising

The Commission monitors food advertising for false and deceptive claims. A U.S. Department of Agriculture study showed that persons over age 65 spend about 22 percent of pre-tax income on food, compared to 17 percent for persons under age 65. This increases to as much as 40 percent for those with smaller incomes. The Commission staff monitors food ads and during 1990, the Commission staff initiated several new investigations involving claims for food or food supplements.

The Commission charged Miles, Inc., with making unsubstantiated advertising claims about the health benefits of its One-A-Day brand multiple vitamins. Under a consent agreement that has been placed on the public record, Miles agreed not to make any of the challenged claims for any vitamin or mineral supplement, unless it has competent and reliable scientific evidence to substantiate the claims.

The Commission charged the Vons Companies, Inc., which operates several hundred grocery stores in Southern California and Nevada, with falsely claiming that its produce is free of pesticides. Vons distributed a two-page brochure which advertised "pesticide free produce," representing that all the produce it sells is free of pesticides. Under the consent agreement, Vons agreed not to misrepresent whether any foods it sells contains pesticides. In addition, the company must not make any representation concerning the health effects of any pesticide used on or present in the food unless it has competent and reliable scientific evidence to substantiate the claim.

The Commission charged a New York company with making false and unsubstantiated therapeutic claims in its Chinese-language advertising for five dietary food supplement products. American Life Nutrition, Inc. ("ALN"), American Life Farfun, Inc., and Ling Won Tong advertised its products as preventing or treating a host of diseases and conditions, including breast cancer, heart disease, diabetes, arthritis, high blood pressure, constipation, and low sex drive. The consent agreement prohibits ALN from making efficacy, safety, or performance claims for any food or drug in its advertisements unless it possesses and relies upon competent and reliable scientific evidence that substantiates the representations. ALN also agreed to publish retractions in eight newspapers and magazines, and to send corrective notices to past wholesale and retail purchasers.

The Commission has accepted for public comment a consent agreement with CPC International, Inc., regarding its advertising for Mazola corn oil and Mazola margarine. The complaint accompanying the settlement charges that CPC falsely represented that consumption of chicken fried in Mazola will reduce serum cholesterol levels, when, in fact, it will not cause a reduction when compared to foods containing no fat or cholesterol. The complaint also alleges that CPC did not have a reasonable basis for its representation that adding Mazola to the diet without other dietary changes will cause a 17 percent reduction in serum cholesterol levels. CPC has agreed not to make such misrepresentations in future advertising. In addition, CPC must have competent and reliable scientific evidence to substantiate representations

that any oil or margarine product can or may affect heart disease or serum cholesterol levels. The FTC's investigation was conducted in cooperation with 10 States (California, Florida, Illinois, Iowa, Massachusetts, Minnesota, Missouri, New York, Wisconsin, and Texas), who announced an assurance of discontinuance with CPC on the same day as the FTC announced its proposed agreement.

The Commission staff also submitted comments to the Food and Drug Administration on both an advance notice of proposed rulemaking and the notice of proposed rulemaking concerning possible changes in the regulation of food labeling. The comments supported the FDA's proposals to amend its rules to allow truthful, substantiated health claims in food labeling. In addition, the comments suggested that the FDA adopt a flexible substantiation standard similar to the FTC's reasonable basis standard used in assessing health claims in advertising.

ii. Health Care Advertising

The Commission staff regularly monitors over-the-counter drug advertising, focusing especially on fraudulent or deceptive performance, pain relief, and safety claims. Such claims are likely to be important to older Americans because of the higher incidence of health problems among this population.

In fiscal year 1990, the Commission took actions against several companies involving claims for health care products. These included actions against two companies—Twin Star Productions, Inc., and TV, Inc.—that made claims in 30-minute commercials, known as infomercials.

The Commission charged Twin Star with making false and unsubstantiated claims in connection with program-length commercials for weight-loss, baldness, and impotence products and with falsely representing that their program-length commercials are something other than paid commercial advertising. The consent agreement prohibits the company from making unsubstantiated efficacy claims for any product or service. The consent also requires that defendants not misrepresent that a paid advertisement is an independent program, and requires Twin Star and five of the six individuals to pay a total of \$1.5 million in consumer redress.

The Commission charged TV, Inc., with falsely claiming that, among other things, consumption of any bee pollen product can successfully treat allergy patients; slow, prevent, or reverse the aging process; cure or prevent impotence; and relieve pain, including arthritis. TV, Inc. was also charged with misrepresenting that it is an independent program and not a paid commercial. The consent agreements prohibit TV, Inc., from making health claims for bee pollen products or misrepresenting that its program is not a paid commercial.

The Commission filed a complaint in Federal court alleging that claims made by Allied International Corp. that its Fat-Magnet diet pills will help users lose weight without dieting or exercise are false and/or misleading. The complaint asks the court to issue preliminary and permanent injunctions and to order defendants to pay consumer redress.

In September 1990, the Commission staff announced a broad scale investigation of the diet industry focusing on the service-oriented diet programs. The new investigations target commercial diet clinics as well as hospital-based or physician-supervised programs that are promoted through claims that may misrepresent the program's efficacy in achieving safe, long-term weight loss. Such claims are likely to be important to older consumers because of the high incidence of weight-related health problems that occur within this population.

The Commission's examination of the marketing of diet services has three key objectives. The first is to identify any false and deceptive claims being made by major marketers of diet services and halt them through negotiated settlements or enforcement actions. The Commission currently has underway 14 such investigations. One complaint, which has already been filed in Federal district court, charges a group of clinics operating in California, Nevada, Texas, Georgia, and Virginia with falsely claiming that it's "medically safe" program can adjust consumers' metabolism and achieve weight loss at a rate of 1½ pounds a day.

The FTC's second objective is to provide members of the public with information they can use to select diet programs that fit their individual needs and avoid programs that may be ineffective or unsafe. The agency has recently issued a "Facts for Consumers" pamphlet on Diet Programs, which advised consumers on what questions to ask before choosing a diet program.

The agency's third objective is to work with State and local law enforcement agencies, medical boards, and industry and professional organizations who also have an interest in this area. Those contacts continued through the year.

iii. Other

The Commission accepted a settlement resolving 1986 charges that an R.J. Reynolds advertisement titled "Of Cigarettes and Science" made false and misleading claims about the purpose and results of the Multiple Risk Factor Intervention Trial (MR FIT), a long-term scientific study funded by the National Heart, Lung and Blood Institute of the National Institutes of Health. Under the consent order Reynolds agreed not to misrepresent in future advertisements the purpose or results of the MR FIT study or the results or content of any scientific test concerning the association between cigarette smoking and health effects.

II. NON-HEALTH-RELATED ACTIVITIES

FUNERAL SERVICES

The Commission's Funeral Rule, which became effective in 1984, is of particular concern to older Americans. It seeks to increase consumer access to accurate information about prices, options, and legal requirements prior to and at the time of purchase of a funeral. In summary, the Funeral Rule: (1) requires funeral directors to provide consumers with a general price list, a casket price list, and an outer burial container price list, as well as an itemized statement of the goods and services selected by the customer at the time funeral arrangements are made; (2) prohibits misrepresentations of legal and cemetery or crematory requirements and the preservative value of embalming, caskets, and vaults; (3) prohibits funeral directors from requiring the purchase of certain goods and services as a condition for purchasing other goods and services; (4) prohibits funeral directors from embalming without prior approval except in very limited circumstances; (5) requires funeral directors to make alternative containers available for direct cremation; and (6) requires funeral directors to give price information over the telephone.

In fiscal year 1990, the Commission filed five enforcement actions for violations of its Funeral Rule. All resulted in court-approved consent decrees. A total of \$110,000 in civil penalties was imposed. One case required payment, in consumer redress, of \$14,350 to customers who were charged for goods that were not actually provided. In fiscal year 1989, a court imposed a civil penalty of \$80,000 against a Texas funeral home. An appeal of this decision was dismissed by the U.S. Court of Appeals for the Fifth Circuit in 1990. Other matters are under investigation or negotiation by the Commission staff. Staff members also continue to work closely with consumer and industry groups to educate their members about the requirements of the Funeral Rule.

In May 1988, the Commission issued a notice of proposed rulemaking initiating a proceeding to review the Funeral Rule. This proceeding was mandated by Section 453.10 of the Rule. During this mandatory review, the Commission will determine whether the Rule should be retained unchanged, or be expanded, modified, or repealed. The determination will be based on whether the Rule is operating as expected and whether it is still needed. Eighty witnesses presented testimonial and survey evidence at four public hearings held in late 1988 and early 1989.

In the summer of 1990, the rulemaking staff and presiding officer published their respective reports summarizing the record evidence and making recommendations to the Commission. Both the rulemaking staff and the presiding officer recommended overall retention of the rule, but also recommended several modifications to increase provider compliance and consumers' understanding of their rights under the rule. During a comment period on the reports, 50 public comments were received from the industry and consumers. The rulemaking staff is now preparing a summary of those comments and its final recommendations to the Commission.

In July 1990, the Commission charged a burial vault manufacturer with violating an earlier order against the company. Under a consent decree, the company will pay a civil penalty of \$100,000 and is prohibited from making any representations about the durability or expected life of any burial vault without having a reasonable basis for the claims.

During 1990, the Commission staff continued its investigations of certain State board regulations that may restrict pre-need sales of funeral services. During the period, one State board deleted its prohibition on testimonial advertising affecting both pre-need and at-need funeral services.

During the past year, the Commission staff has investigated several mergers of funeral homes and of cemeteries, in order to be certain that these would not have anticompetitive effects. Also, the staff scrutinized a merger between two manufacturers of funeral products that raised significant competitive questions. The parties

abandoned the transaction after learning that the Commission staff planned to request additional information about the merger.

MAIL ORDER SALES

In promulgating the Mail Order Rule, the Commission noted that less mobile consumers, including older Americans, frequently ordered merchandise by mail. The Rule requires sellers to: make timely shipment of orders, give options to consumers to cancel an order and receive a prompt refund or to consent to any delay, have a reasonable basis for any promised shipping dates (the Rule presumes a 30-day shipping date when no date is promised in an advertisement) and make prompt refunds. The Commission staff works closely with industry members and trade associations to obtain compliance with the Rules and initiates law enforcement actions where appropriate.

In 1989, the Commission initiated a rulemaking proceeding to determine whether the Rule should be extended to merchandise ordered by telephone. Submission of oral and written comments was completed June 15, 1990. Staff is now evaluating the rulemaking record for the purpose of making recommendations to the Commission. In the rulemaking, the American Association of Retired Persons testified without contradiction that lack of mobility is one of the factors that induce older Americans to order merchandise by telephone.

ENERGY COSTS

The cost of heating and cooling one's home can be significant to many consumers, including older Americans. These individuals may be more likely to spend time at home than working or school age persons, and thus may not be able to conserve energy costs by lowering the thermostat during the day in winter or raising the thermostat during the day in summer. The cost of heating or cooling may be particularly burdensome for the older person who lives alone, because the cost is not proportionately less than for a household including two or more persons. During periods of rising energy costs, heating and cooling demands account for an even greater share of the budget of fixed income consumer, such as many older Americans.

The Commission's Rule regulating claims about home insulation products, the R-value Rule, seeks to protect consumers who attempt to lower energy costs by adding insulation to their existing homes or when purchasing new homes, including retirement housing.¹ The Rule requires that insulation sellers disclose the R-value of the insulation so that consumers can buy the best thermal protection for their money. The Rule also requires installers and new home sellers to give consumers a written disclosure of the type and R-value of the insulation installed.

In fiscal year 1990, the Commission filed two settlements in district court that resolved alleged violations of the R-value Rule. One action charged that Sears, Roebuck and Co. failed to make required disclosures in advertisements. The consent decree required the defendant to pay a civil penalty of \$100,000, to pay for an advertisement to educate consumers about home insulation, and to comply with the Rule in the future. The second action charged that an insulation testing laboratory and its owner violated the Rule by failing to conduct tests properly. The settlement requires the defendants to pay a civil penalty of \$10,000. In addition, the defendants must meet specific accreditation and performance standards before conducting R-value tests, and must comply with the Rule in the future.

In fiscal year 1990, the Commission began conducting an industrywide sweep of home insulation manufacturers to determine whether or not they are in compliance with the Rule. The sweep is being conducted to help the Commission ensure, in a systematic and thorough fashion, that consumers receive accurate energy savings information.

During the past year, the Commission staff has also assisted the Department of Justice in investigating whether the recent increased prices of gasoline were caused at least in part by anticompetitive activities, such as price-fixing.

DOOR-TO-DOOR SALES

The Commission's Cooling-Off Rule requires that consumers be given a 3-day right to cancel certain sales that occur away from the seller's principal place of business. This sales method may have a greater impact on older Americans, who may be more susceptible to the high pressure sales tactics that sometimes accompany door-

¹ Value measures insulation effectiveness; the higher the R-value, the greater the insulating power.

to-door sales. The Commission continued monitoring and enforcing compliance with the Cooling-Off Rule during 1990. Staff regularly investigates complaints and reviews the practices of companies engaged in door-to-door sales to ensure that their procedures adequately inform customers of their right to cancel.

DELIVERY OF LEGAL SERVICES

During 1990, the Commission staff continued its efforts to facilitate consumers' access to legal services. Removing unnecessary restrictions may benefit older Americans, whose income often exceeds limits established by government-sponsored assistance programs but may be insufficient to cover high legal fees.

For instance, in October 1989, the Commission staff filed an *amicus curiae* brief in the Florida Supreme Court concerning a proposed advisory opinion of the Florida Bar's Standing Committee on the Unlicensed Practice of Law. The proposed opinion would prevent non-legal professionals from performing certain advisory functions with respect to pension plans. The staff brief suggested that the prohibition could injure those who wish to establish or revise such plans and the employees who participate in them.

In November 1989, the Commission staff commented to the Ohio State Bar Association on several proposed amendments to the Ohio Code of Professional Responsibility. The comment noted that the proposed rules appeared to prohibit self-laudatory statements, claims concerning the quality of the lawyer's services, emotional appeals, client testimonials, any claims that are not verifiable, and certain kinds of fee advertisements. The comment suggested that these proposed restrictions may restrict the flow of valuable information to consumers and may have the potential to impede competition or increase legal costs without providing countervailing benefits to consumers.

In April 1990, the Commission staff commented to the State Bar of Arizona on certain proposed amendments to the Arizona Rules of Professional Conduct concerning client testimonials, electronic media advertising, cautions against excessive reliance on advertising, and written communication with prospective clients. The comment suggested that these provisions may restrict the flow of truthful information to consumers and therefore, on balance, may have the potential to impede competition and increase the costs of legal services without providing countervailing benefits to consumers.

FINANCIAL SERVICES

Financial and investment issues are of particular importance to older Americans, many of whom depend on financial investments for all or part of their income. During the past year, the Commission acted against a rule of the American Institute of Certified Public Accountants (AICPA) that prohibited its members from working on a commission basis. The AICPA rule against commissions meant that member-accountants charged the client a fee for investment advice, and could not choose to be compensated instead by commissions paid by the providers of the investment instruments that the client purchases. Many consumers—particularly those of moderate means—may prefer the second option. The Commission accepted a consent agreement under which AICPA agreed to modify its rule and permit member-accountants to choose to be compensated on a fee-for-service or a commission basis. The change may be of particular benefit to Americans with moderate incomes but a significant amount of principal to invest—who are, to a considerable extent, older Americans.

In May 1990, the Commission staff commented on a notice of proposed rulemaking issued by the Office of the Comptroller of the Currency (OCC). The notice requested comments on the elimination of some regulatory restrictions on the ways in which national banks can advertise their trust services, which are often of particular interest to older Americans. The comment stated that the OCC proposal would appear likely to benefit consumers by reducing their costs of collecting information on the various collective investment trusts available and by allowing national banks to advertise the existence of new services involving collective investment trusts.

CREDIT

In the area of consumer credit, the Commission protects older Americans by enforcing the age discrimination provisions of the Equal Credit Opportunity Act (ECOA). Although Federal law permits creditors to consider information related to age, under certain circumstances, creditors may not deny, reduce, or withdraw credit solely because an otherwise qualified applicant is over 61 years old. Retirement income must be considered in the same manner that employment income is

considered in evaluating a credit application. Moreover, although credit-related insurance may be unavailable to older persons because of their age, a creditor may not use this as a reason for credit denial.

In its enforcement activities during the past year, the Commission resolved charges of age discrimination in violation of the ECOA on a voluntary basis, by obtaining consent decrees against two groups of finance companies and their individual owners. In addition, the Commission currently is in litigation with two other finance companies that have been charged with age discrimination.

The first of the voluntary settlements occurred in February 1990, with the filing of a complaint and entry of a consent decree. The complaint alleged that a group of five related finance companies and two individual defendants required successful applications to be employed full-time, thereby discriminating against elderly applicants who received their income from public assistance, retirement benefits, and part-time employment. The defendants paid a civil penalty of \$50,000 and are enjoined from future violations.

In the spring of 1990, similar complaints were filed and consent decrees entered in 10 age discrimination cases, collectively known as the Chesterfield cases, a group of 17 related finance companies, the auditing company that advises them, and the individual owner of the auditing company. The complaints alleged that the finance companies had a policy of refusing to accept applications from persons who were not employed on a full-time basis. The complaints charged that the companies discriminated against the elderly by refusing to consider income from public assistance programs, part-time employment, or retirement benefits. The Chesterfield defendants paid a civil penalty of \$90,000 and agreed to a permanent injunction.

In August 1990, the Commission also brought age discrimination actions against another group of related finance companies doing business in two different jurisdictions. The complaints alleged that an individual, and the finance companies and related businesses in which he has an interest, denied credit to elderly applicants whose income derived from a public assistance program, part-time employment, or retirement benefits, rather than from full-time employment. The Commission asked the courts to issue permanent injunctions and to require the payment of civil penalties. These cases are in litigation.

Finally, in September 1990, an age discrimination complaint was filed in Federal district court charging Tower Loan with denying credit to elderly applicants who did not qualify for credit life or other credit-related insurance due to their age. The complaint also alleges that Tower offered credit to elderly applicants on less favorable terms, by requiring that they obtain younger cosigners who could purchase credit insurance. The complaint seeks injunctive relief, the release from liability of cosigners unlawfully obtained, and the payment of a civil penalty. This case is in litigation.²

In July 1990, the Commission issued an administrative complaint charging Tower Loan with violations of the Truth-in-Lending Act (TILA) and the FTC Act. This case arose out of the same investigation that resulted in the Commission's ECOA case filed in September, but the law requires the two actions to be brought separately. In the administrative action, the complaint alleges that Tower violated the TILA and FTC Acts by requiring consumers to purchase credit life, accident, health, or loss-of-income insurance in connection with their loans but failing to include the insurance premiums in the true cost of credit disclosed to consumers, such as the annual percentage rate. Instead, the complaint alleges, Tower included these charges in the amount to be financed. Additionally, the administrative complaint alleges that Tower engaged in an unfair trade practice, violating the FTC Act, by requiring consumers to execute statements that the insurance was voluntarily chosen when, in fact, the insurance was required to obtain the loan. These practices are related to the charges of age discrimination discussed above.

All of the age discrimination actions that the Commission brought during the year arose from the Commission's ECOA testing project. Testing—a process where individuals of equal creditworthiness but differing personal attributes and income sources pose as applicants for credit—has been used by the Commission for over 10 years to detect illegal discrimination, and it remains an important enforcement tool.

In April 1990, the Commission staff commented on a Federal Reserve System (FRS) notice of proposed rulemaking to delete or revise a provision of Regulation Z, which implements the TILA, permitting creditors to freeze a borrower's credit line when the interest rate cap on a home equity line is reached. The comment support-

² This action arose from the same investigation that resulted in the Commission's Truth-in-Lending Act (TILA) case against Tower Loan, discussed below. Because the TILA requires restitution actions to be brought administratively, the action could not be joined in Federal court.

ed a FRS proposed alternative that would allow creditors to offer variable-rate open-end home equity credit lines that may be frozen or reduced when the maximum rate cap is reached, as long as this right is disclosed in the contract. The comment stated that this alternative would leave lenders free to compete on terms as well as rates for such lines of credit. This would leave informed consumers free to choose combinations of rates and terms that would best suit their needs.

GROCERIES

High food prices are significant to most consumers, including older Americans who might find it difficult to travel and comparison shop. The Commission staff watches for mergers and acquisitions in the grocery-store industry that could lead to higher prices or have other anticompetitive effects. In the past year, the Commission obtained consent orders against two grocery-store mergers that raised anticompetitive concerns. In one case, the Commission issued a consent decree with MTH, which has now divested 16 supermarkets in 12 cities in Vermont and New York. In the second case, a consent was finalized that requires Red Food to divest two of its supermarkets in the Chattanooga area, as well as four of seven former Kroger stores, in order to cure what the Commission alleged to be an anticompetitive overlap in that city.

TELEMARKETING FRAUD

i. Investment Fraud

The Commission's investment fraud program is another example of a program that benefits all consumers, but especially older Americans. Investment frauds frequently victimize the public through false promises of large returns on "safe" investments. These frauds obviously harm all investors, but they can particularly hurt older investors, who are vulnerable to fraudulent operators and often ill-prepared to absorb the losses. Some investment fraud firms have bilked individual consumers of \$5,000 to \$10,000 or more by promising large returns for investments in art works, gold mines, gemstones, precious metals, and rare coins. These firms usually employ telephone room salespersons who use high-pressure, polished sales pitches.

Although fraud cases, especially those involving oral misrepresentations, are very difficult to investigate, the Commission has an active program to combat investment fraud. Since 1982 the Commission has succeeded in placing approximately 256 named defendants under preliminary or permanent Federal district court orders barring fraudulent and deceptive practices. The Commission also has obtained court orders freezing personal and corporate assets that may be used for consumer redress. The Commission staff estimates that since 1982 the Commission's actions have halted frauds that cost consumers approximately \$1.1 billion. To date the Commission's efforts have resulted in the distribution of \$14.7 million in consumer redress, in freezing \$5.6 million in assets for future distribution, in judgments for \$120 million, and in placing \$52 million in the hands of court-appointed receivers.

In fiscal year 1990, the Commission continued its active program in this area. The Commission filed 13 cases in Federal district court involving rare coins, gemstones, precious metals, and investment art. In all of these cases the Commission has been able to secure initial or permanent injunctive relief.

ii. Other Telemarketing Scams

The Commission remains concerned about the proliferation of companies selling a variety of goods and services over the telephone through deceptive means—so-called "telemarketing scams." The Commission has been concerned about travel scams and scams involving the sale of water purifiers, which are of significant interest to older Americans for several reasons.

With respect to travel scams, many older Americans have spent years in the work force saving and planning for travel during their retirement years. Thus, they provide a ready market for travel services. In addition, older Americans often have fixed incomes and seek "bargain" vacations. Finally, many older Americans may find telephone shopping to be a convenience, if not a necessity; thus, telemarketers provide an easy and sometimes essential means of purchasing goods and services, including vacation packages. For these reasons, the Commission is sensitive to the susceptibility of older Americans to travel scams.

During 1990, the Commission staff continued investigations of travel companies engaged in telemarketing fraud, and monitoring of the sales practices of companies that sell vacation or travel vouchers and certificates. As part of these efforts, the Commission obtained a \$15.9 million default judgment for the Government against

World Travel Vacation Brokers. As a result, the Commission took possession of about \$700,000 in corporate assets to be used in a consumer redress program.

Also this year, the Commission filed consent agreements in two telemarketing matters. The judgment against Travel World International involved a stipulated permanent injunction enjoining their deceptive practices. The Commission also obtained a permanent injunction against Vacation Travel Club, World Cruise Club, World Travel Club, and their owner. The order enjoins future misrepresentations and the failure to provide credits to consumer accounts, and awards redress to consumers who purchased vacation packages from the defendants.

With respect to water purifier telemarketing scams, older consumers may be particularly concerned about their health, and fraudulent telemarketers play to this concern by making false and misleading claims about the health benefits associated with their products. During 1990, the Commission continued its Federal court litigation against companies that misrepresented the ability of water purifiers to remove contaminants, promised consumers valuable prizes if they purchased the purifiers (but delivered essentially worthless prizes), or failed to provide consumers with refunds of the sizeable fees for the purifiers upon request, as promised. The Commission's objectives are to permanently prohibit the defendants' misrepresentations and to obtain redress for injured consumers.

LAND SALES AND TIMESHARE MEMBERSHIP REALES

Since 1972, the Commission has issued 13 orders against land developers. The companies were charged with misrepresenting that every purchase of land is a sound financial investment; that it includes little or no monetary risks; and that it will benefit the purchaser economically as a result of profitable resale. Many of the consumers who purchased these undeveloped lots are now senior citizens. These persons counted on the land purchases to aid them in their retirement years or to serve as developed homesite property to build their retirement homes.

In May 1990, a group of southwest Texas land promoters agreed to pay \$2.5 million in consumer redress to settle a suit the Commission had filed in Federal court against the promoters, who had been found to have violated the FTC Act in an earlier administrative proceeding. According to the FTC complaint, the defendants used fraudulent or dishonest tactics to induce consumers to invest in arid, semi-desert land located in Texas. The defendants claimed the land was a good investment with little or no risk of loss. In fact, the parcels of land were not good investments.

The Commission filed two cases in Federal district court against marketers of timeshare membership resale services. Many of the purchasers of timeshare membership are older Americans or those who intended to use the memberships in retirement. At the request of the Commission, the court entered *ex parte* temporary restraining orders and froze the assets of the corporations and their principals. In one case, the court entered a permanent injunction against deceptive representations and ordered defendants to pay \$1.25 million in consumer redress.

III. CONSUMER EDUCATION ACTIVITIES

The Commission, through its Office of Consumer and Business Education, is involved in preparing and disseminating a variety of consumer publications and broadcast materials. Many of the subjects are of significant interest to older consumers. Some recent consumer education activities are described below.

COMPLAINT RESOLUTION AND SHOPPING AT HOME

In 1990, the Commission continued its cooperative efforts with the American Association of Retired Persons (AARP) in distributing "How to Write a Wrong," a booklet jointly developed by the Commission and AARP. The booklet explains how to complain effectively about consumer problems and get results and also contains information about two types of merchandising frequently aimed at older citizens: door-to-door sales and mail order promotions. This booklet is a component of a training program developed by AARP for use in its 5,000 local offices around the country. The FTC, AARP, and the Consumer Information Center in Pueblo, CO., distributed nearly 40,000 copies in 1990. More than 650,000 copies of the publication have been distributed since it was first published in 1983.

TELEMARKETING SCAMS AND OTHER FRAUD

During 1990, the FTC continued its focus on telemarketing fraud and distributed brochures concerning various aspects of the topic. Over the past 3 years, for exam-

ple, the Commission has filled requests for nearly one-half million copies of publications such as "Magazine Telephone Scams," "Telephone Investment Frauds," and "Telemarketing Travel Frauds."

The Commission also continued its efforts to provide information about other kinds of marketplace fraud that could be of special importance to older Americans because the topics refer to activities, products, and services often important to them. Such publications include: "Dollars for Dancing," which cautions consumers against contract sales practices used by some dance studios; "Car Rental Guide," which explains car rental contract terms and suggests ways to negotiate a lower price; and "Programlength TV Commercials," a new kind of television sales program that may misrepresent itself as an objective news show. Other publications that advise consumers about products and services include: "Buying a Home Water Treatment Unit," which gives scientific purchasing information about a product that sales people sometimes misrepresent; and "Lawn Service Contracts," which describes how to select a contractor who will meet work requirements and environmental concerns. Nearly 150,000 requests for these five brochures have been filled over the past 2 years.

CREDIT

During 1990, the FTC continued to market and distribute credit publications that it released in the past few years. The following titles are especially useful to older Americans who find they have problems getting credit.

"Building a Better Credit Record," explains how to understand credit records and credit reports and warns against using fraudulent credit repair clinics. Since it was produced in 1988, more than 325,000 copies of the booklet have been requested. "Credit and Older Americans," produced in 1987, explains the Equal Credit Opportunity Act, focusing on its age provisions. Since its release, more than 125,000 fee copies have been distributed.

Other credit publications that are useful to the elderly and that the FTC has distributed since 1987, include: "Fix Your Own Credit Problems;" "Lost or Stolen Credit and ATM Cards;" and "Buying and Borrowing." "Fix Your Own Credit Problems" is a how-to publication that also cautions consumers about credit repair clinics. Nearly 300,000 copies of this publication have been distributed in English and Spanish during the past 4 years. "Lost or Stolen Credit and ATM Cards," which discusses liability, has been distributed to nearly 175,000 consumers since 1987. "Buying and Borrowing," a summary of information about buying on credit, buying on layway, and buying by phone and mail, has been distributed to more than 45,000 requestors over the past 4 years.

FUNERALS

During 1990, the Commission continued its print education campaign explaining key elements of the Funeral Rule. In response to individual requests, the Commission's staff and the Consumer Information Center sent out approximately 50,000 copies of the consumer brochure last year, bringing total distribution of this publication since 1984 to more than 375,000.

HEALTH

In 1990, the Commission and AARP distributed more than 125,000 copies of their joint publication, "Healthy Questions." This booklet explains how to select and use the services of health care professionals, including doctors, dentists, pharmacists, and vision care specialists. Since the publication's release in 1985, nearly 650,000 copies have been distributed.

In addition, the Commission produced its own consumer brochure, "Health Claims: Separating Fact from Fiction," on specific aspects of health fraud. Since its release in 1986, more than 110,000 copies have been distributed in English and Spanish to organizations that work on behalf of aging and individual consumers.

HOUSING

In cooperation with AARP, the Commission developed a publication entitled "Your Home, Your Choice: A Workbook for Older Persons and Their Families." The publication addresses independent and assisted living options for older persons, including home health care, nursing homes, and life-care facilities. Such information is important for older Americans because more than 90 percent of persons over age 65 live in some form of "independent" housing. During 1990, the booklet was distributed to more than 55,000 requesters by the Commission, AARP, and the Consumer

Information Center, bringing total distribution since 1985 to more than 400,000. In addition, AARP uses the workbook as a component in one of its training programs.

To enhance outreach effort to seniors, the Commission worked with AARP to produce a video news release (VNR) based on "Your Home, Your Choice." The three-part VNR, released in spring 1990, focuses on housing options for the elderly. Options discussed include: changes made within a home to accommodate seniors, house sharing plans such as accessory apartments, and continuing care communities.

In 1986, the Commission published and distributed a brochure called "Real Estate Brokers" to help familiarize consumers with ways to protect their interests when buying or selling a home. The brochure explains technical terms that are used in the industry and elaborates on matters relating to real estate contracts. Since 1986, 110,000 copies of the free brochure have been distributed to organizations on the aging and others.

In 1986, the Commission also released a consumer booklet, "How to Buy a Manufactured Home," prepared in cooperation with the Manufactured Housing Institute (MHI). The booklet discusses warranties and other consumer protections and explains the importance of home placement, site preparation, transportation, and installation. MHI released the publication at its 50th annual National Housing Show in Louisville, KY. It made 115,000 booklets available to manufacturers, who distributed them to retail sales centers for point-of-sale availability to consumers. MHI also provided copies of the booklet to the Consumer Information Center for distribution. In 1990, more than 15,000 copies were requested, which brings total distribution from the Commission and the Center to more than 95,000. In a readership survey conducted by the Consumer Information Center in 1986, 45 percent of the respondents were 55 years of age or older.

MONEY MATTERS

As a companion piece to "Healthy Questions," the Commission, in cooperation with AARP, developed a consumer publication called "Money Matter," which explains how to select and use the professional services of lawyers, accountants, financial planners, real estate brokers, and tax preparers. In 1990, the booklet was distributed to 90,000 requesters by AARP, the Consumer Information Center, and the FTC, bringing total distribution since 1986 to approximately 700,000.

Another joint project produced by the FTC and AARP in 1990 is "Facts About Financial Planners." This publication provides information to help consumers decide if they need a financial planner, and if so, offers guidelines for selecting a good planner. The publication also provides sample questions to ask a planner during the initial interview.

CONCLUSION

In this report we have reviewed Commission programs that are of special significance to older Americans. We emphasize, however, that older Americans also benefit very substantially from the Commission's general enforcement and education activities. In all of its work the Commission is guided by the conviction that vigorous and honest competition is the best mechanism for satisfying consumer needs at the lowest possible cost. Competitive markets are particularly important to older persons, who may be less mobile and limited in their ability to comparison shop. Commission efforts to halt consumer deception and eliminate anticompetitive conduct are designed to keep markets free and fair, and thereby promote the welfare of all consumers.

ITEM 21. GENERAL ACCOUNTING OFFICE

DECEMBER 4, 1990.

DEAR MR. CHAIRMAN: This report is in response to the Committee's September 24, 1990, request for a compilation of our fiscal year 1990 products, ongoing work, and other activities regarding older Americans.

Our work covered a broad range of elderly issues, including income security, health care, housing, social and community services, employment, and age discrimination. Some Federal policies, such as Social Security and Medicare, are directed primarily to the elderly. Other Federal policies, such as social services block grants, food stamps, or Medicaid, target the elderly as one of several groups served by a program or funding mechanism.

In the appendixes, we describe five types of GAO activities that relate to older Americans:

- Reports on policies and programs directed primarily at older Americans (see app. I).
 - Reports on policies and programs that include the elderly as one of several target groups (see app. II).
 - Congressional testimonies on issues related to older Americans (see app. III).
 - Ongoing work on issues related to older Americans (see app. IV).
 - Other activities by GAO officials, such as speaking engagements, publications, and interviews by the media, on issues related to older Americans (see app. V).
- These products, ongoing work, and other activities, and the issues addressed, are presented in table 1. The table shows that we most often addressed elderly health issues during fiscal year 1990.

TABLE 1: GAO ACTIVITIES RELATING TO THE ELDERLY IN FISCAL YEAR 1990

Issue	Type of activity				
	Reports focused on the elderly	Reports with elderly as one of several target groups	Testimony	Ongoing activities as of Sept. 30, 1990	Other activities ¹
Food assistance.....	0	7	4	2	1
Health	27	13	14	46	26
Housing.....	0	6	5	10	6
Income security.....	15	8	9	40	4
Social and other services.....	1	0	1	0	5
Veterans ²	9	5	2	10	0
Other.....	3	2	0	0	0
Total.....	55	41	35	108	42

¹ Includes speaking engagements and publications.

² Includes veterans' health issues.

Appendix I provides summaries of 55 issued reports on policies and programs directed primarily at the elderly. The reports address food assistance, health, housing, income security, social and other services, and veterans' issues. We also discuss other activities, such as the Older Americans Act.

Appendix II provides summaries of 41 reports in which the elderly were one of several target groups for specific federal policies. These activities are generally financed in conjunction with services to other populations. For example, block grants fund community services or energy assistance for the elderly as well as services for other age groups; Medicaid finances nursing home care as well as financing medical care for poor people of all ages; and Native American programs fund social and health services for Native American elderly as well as programs for other Native Americans.

Appendix III describes the 35 testimonies given in fiscal year 1990 on subjects focused primarily on older Americans. We testified most often on health issues.

In appendix IV we have listed 108 studies directly related to older Americans that were ongoing as of September 30, 1990.

In addition, GAO officials often participated in news interviews and professional and academic panels, and presented papers on topics on which they have particular expertise. Appendix V describes these activities.

You also asked for information on our employment of older Americans. As you are aware, our policies prohibit age discrimination (see app. VI). On September 30, 1990, about 54.8 percent of our workforce was 40 years of age or older. We continue to provide individual retirement counseling and group preretirement seminars.

As arranged with your office, we are sending copies of this report to interested congressional committees and subcommittees. Copies also will be made available to others on request.

This report was prepared under the direction of Linda G. Morra, Director, Human Services Policy and Management Issues (275-1655) who may be reached on (202) 275-1655 if you have any questions.

Other major contributors are listed in appendix VII.

Sincerely yours,

LAWRENCE H. THOMPSON,
Assistant Comptroller General.

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FISCAL YEAR 1990 GAO REPORTS ON ISSUES
PRIMARYLY AFFECTING OLDER AMERICANS

During fiscal year 1990, we issued 55 reports on issues primarily affecting the elderly. Of these, 27 were on health, 15 on income security, 1 on social services, 9 on veterans' issues (including 7 on veterans' health care), and 3 on other issues. An asterisk after the report title indicates that the review was performed at the request of Committees or Members of Congress. Two asterisks indicate that the work was mandated by statute. When no asterisks are noted, the work was undertaken as part of GAO's basic legislative responsibility to audit and evaluate Federal agencies and programs.

HEALTH

Employee Benefits: Extent of Multiemployer Plan Retiree Health Coverage (GAO/HRD-90-132, July 17, 1990)*

To what extent do companies provide retiree health coverage indirectly, through multiemployer plans? Although just over 6 percent of all retirees in company-sponsored health plans are covered by multiemployer plans, these plans are an important source of coverage in certain industries--most notably construction--where few individual firms have retiree health benefits. GAO analyzed data on 915 plans and determined the numbers of (1) multiemployer health plans with retiree coverage, (2) workers enrolled in such plans, and (3) retirees in such plans. GAO also estimated the total number of private sector workers and retirees in company-sponsored health plans with retiree coverage.

Health Care: Criteria Used to Evaluate Hospital Accreditation Process Need Reevaluation (GAO/HRD-90-89, June 11, 1990)*

The Health Care Financing Administration (HCFA)--part of the Department of Health and Human Services (HHS)--relies on the Joint Commission on Accreditation of Healthcare Organizations to identify and resolve problems in hospitals serving Medicare patients. However, HCFA lacks assurances that the hospitals surveyed by the Joint Commission are complying with Medicare requirements. While HCFA is unsure of the extent to which it can direct the Joint Commission to change its accreditation process to meet HCFA's needs, GAO believes that HCFA should try to guide the Joint Commission to ensure that hospitals meet Medicare requirements. If such efforts are unsuccessful, alternatives to the present system of accreditation can be considered. However, because none of the alternatives appears to be clearly superior to the present system, GAO discusses several options for improving the system. GAO summarized this report in June testimony before the Congress.

Long-Term Care Insurance: Proposals to Link Private Insurance and Medicaid Need Close Scrutiny (GAO/HRD-90-154, Sept. 10, 1990)*

Several state demonstration projects have been proposed to coordinate private long-term care insurance with Medicaid. The goal of the projects is to see whether the promotion of long-term care insurance for the elderly will yield more adequate long-term care protection without increasing public sector costs. Although the projects vary significantly, most propose allowing people who buy a qualifying private long-term policy to become Medicaid-eligible after the policy pays for a period of long-term care costs. Participants would not have to "spend down" or deplete as much of their savings as is now required to meet Medicaid eligibility thresholds. GAO believes that the proposed projects could reduce the financial hardships that some elderly endure as a result of catastrophic long-term care costs. On the other hand, risks would be involved if the projects are given authority to link private insurance coverage with Medicaid. GAO summarized this report in testimony before the Congress.

Medicaid: Sources of Information on Mental Health Services
(GAO/HRD-90-100, May 7, 1990)*

The availability of mental health services under Medicaid has been a concern to many health experts. This report identifies sources of information on the types of mental health services offered under each state's Medicaid program. GAO found that several federal agencies publish data about (1) Medicaid and mental health expenditures and (2) numbers of recipients of services for each state. However, these agencies publish little information about the specific mental health services available to recipients in each state. Academic, professional, and advocacy groups publish more detailed information about the mental health services available to Medicaid recipients. The reports by these organizations include information on expenditures, eligibility criteria, services covered, and limitations on the availability of those services.

Medicare and Medicaid: More Information Exchange Could Improve Detection of Substandard Care (GAO/HRD-90-29, Mar. 7, 1990)

Peer review organizations, Medicare carriers, and state Medicaid agencies do not now routinely exchange information about physicians they have identified as providing unnecessary or poor-quality care. GAO recommends that HCFA require these groups to routinely exchange such information. Such an exchange, in GAO's view, would improve detection of such care in the Medicare and Medicaid programs; this, in turn, could shorten the time needed to initiate action to change the behavior of physicians responsible for these problems.

Medicare Appeals Process: Part B Changes Appear to be Fulfilling Their Purpose (GAO/HRD-90-57, July 16, 1990)*/**

The Medicare Part B program provides supplemental medical insurance coverage to individuals age 65 and older. In 1987 the process by which claimants could appeal decisions was changed to provide an appeals opportunity beyond that provided at the insurance carrier level in cases that involved disputes of \$500 or more. Claimants could elect on-the-record, telephone, or in-person hearings at the carrier level, before an appeal was made to a federal administrative law judge (ALJ). In 1988 HCFA introduced the requirement that Part B cases go through a mandatory on-the-record hearing before being appealed. If disputed amounts still were more than \$500, claimants could then appeal to an ALJ.

GAO examined the effects of these changes and found that the percentage of cases receiving a telephone or in-person hearing at the carrier level decreased after the introduction of mandatory on-the-record hearings. The percentage of cases appealed to an ALJ increased. GAO reports that the changes to the Part B appeals process seem to be fulfilling their purpose of reducing the number of in-person and telephone hearings and providing claimants an opportunity to appeal beyond the carrier level. GAO did not attempt to determine the reason for its additional observation that the percentage of case decisions resulting in payments to claimants decreased after on-the-record hearings became mandatory.

Medicare Catastrophic Act: Estimated Effects of Repeal on Medigap Premiums and Medicaid Costs (GAO/HRD-90-48FS, Nov. 6, 1989)*

GAO surveyed commercial Medicare supplemental insurance (Medigap) companies and state Medicaid agencies to obtain their estimates of how the repeal of the Medicare Catastrophic Coverage Act of 1988 would affect Medigap premiums and Medicaid budgets. GAO contacted 29 of the commercial insurers that had over \$10 million of earned premiums on Medigap policies during 1987. These commercial insurers said the act's repeal would increase monthly premiums by an average of 15.4 percent. The estimated monthly increases ranged from 6.3 to 41.3 percent. For the 2.5 million subscribers, the repeal would cause projected premium increases of about \$250 million in 1990. GAO also received responses from the Medicaid offices in 37 states and the District of Columbia as to how repeal of the act's Medicare benefit changes would affect their 1990 Medicaid budgets. These states estimated that repeal would increase their Medicaid budgets by about \$1 billion, of which about \$444 million would be state funds and about \$587 million would be federal matching funds.

Medicare Part A Reimbursements: Processing of Appeals Is Slow
(GAO/HRD-90-23BR, Feb. 9, 1990)**

GAO reviewed the adequacy of staffing levels at the Provider Reimbursement Review Board, a five-member quasijudicial body established under the hospital insurance portion (Part A) of the Medicare program. The Board conducts hearings and issues decisions on appeals by hospitals, skilled nursing facilities, and home health agencies on the amount of reimbursement Medicare allowed for beneficiaries' care. GAO found no evidence that HCFA, which administers Medicare, deliberately intended to impair the Board's effectiveness by limiting staff allocations. Nevertheless, HCFA's allocation of resources did impair the Board's ability to process cases. It is difficult to determine accurately the number of staff the Board needs to process cases in a timely manner. The Board has no accurate count of the cases in inventory and may not have realistic time frames for each step in the process. If the Senate Committee on Appropriations wishes to directly monitor the level of resources requested for the Board's operations, it may want to consider directing that the Board be identified separately in the HHS appropriation request.

Medicare: Alternatives for Computing Payments for Hospital Outpatient Surgery (GAO/HRD-90-78, Apr. 3, 1990)*

GAO notes that Medicare may be paying more than necessary for hospital outpatient surgery because of current methods of calculating patient reimbursement. A Medicare prospective payment system for surgery done in hospital outpatient departments is being considered and, if adopted, should eliminate many of the shortcomings of the current system. Because it may be a while before a new system starts up, an interim solution may be desirable. This report discussed three alternatives to the existing payment methodology that the Congress should consider.

Medicare: Assuring the Quality of Home Health Services (GAO/HRD-90-7, Oct. 10, 1989)*

Medicare spending for home health services rose from \$1.5 billion to an estimated \$2.8 billion between fiscal years 1983 and 1989. The number of agencies providing these services increased by 43 percent to almost 6,100. HCFA, which is responsible for ensuring the quality of home health services, contracts with the states to periodically survey home health agencies and find out whether they are complying with HCFA standards.

GAO found that HCFA guidance has not resulted in surveyors using sound methods to (1) sample the patient records they review and (2) interpret Medicare standards consistently in order to present an accurate picture of home health agency performance. In addition, HCFA has not given the states pertinent information gathered by its claims processing contractors and peer review organizations (PROs) for use in assessing compliance with Medicare standards. HCFA is developing training standards for personnel who provide high-tech treatments to Medicare patients in their homes. Current law, however, does not require HCFA to develop training standards for all such personnel. The Congress has revised many aspects of the home health agency certification process in order to improve home care quality. The next step is for HCFA to issue regulations and procedural guidance that will help the home health agencies and the states implement these revisions.

Medicare: Comparative Analyses of Payments for Selected Hospital Services (GAO/HRD-90-108, July 6, 1990)*

One of the goals of the Medicare prospective payment system for inpatient hospital services is to set payment rates that are reasonable from Medicare's perspective and, at the same time, equitable to hospitals. This goal has been a challenge in part because the Medicare Hospital Cost Report--the main source of hospital cost and revenue information needed for policymakers--does not provide all the financial information needed to evaluate Medicare payments rates. This report analyzes hospital costs and revenues in terms of the adequacy of Medicare payment rates. GAO compared Medicare payment rates for inpatient hospital services with Medicaid payments for these same services in California, New York, and Ohio. GAO also analyzed differences among these states in Medicare payments and costs for similar inpatient services. GAO found that, on average, hospitals in all three states were paid a greater percentage of billed charges for Medicare patients than for Medicaid patients.

Medicare: Comparison of Two Methods of Computing Home Health Care Cost Limits (GAO/HRD-90-167, Sept. 28, 1990)**

In 1989 Medicare paid home health agencies about \$2.8 billion for visits made to beneficiaries. Medicare pays for six types of home health visits: skilled nursing; physical, speech, and occupational therapy; medical social services; and home health aide. GAO estimates that Medicare costs would have been cut by 2.5 percent--or \$49 million--if cost limits had been applied by type of visit for cost-reporting periods during the year beginning July 1, 1989. While applying cost limits by type of visit would have reduced payments to twice as many agencies as applying the limits in the aggregate, the payment reductions would have been small for most agencies.

GAO surveyed agencies that would have faced additional reductions if type-of-visit cost limits had been used. Over 40 percent of these agencies said that the additional reductions would have caused them to stop participating in Medicare or to curtail services. In most cases, however, GAO found other agencies in the same geographic areas that were willing and able to expand service even if type-of-visit limits were used. GAO estimates that 1.8 percent of home health visits to beneficiaries would be unavailable if type-of-visit limits were adopted. On a related matter, GAO found that changing the cost-limit-computation method--from the 75th percentile of home health agencies to 112 percent of mean costs--had little effect on limit levels. The purpose of cost limits is to give home health agencies incentives to control cost growth. In the final analysis, the question is whether the additional cost savings from applying cost limits by type of visit are worth the small decrease in beneficiary access that could result.

Medicare: Employer Insurance Primary Payer for 11 Percent of Disabled Beneficiaries (GAO/HRD-90-79, May 10, 1990)**

The Omnibus Budget Reconciliation Act of 1986 made Medicare the secondary payer for medical expenses of certain disabled beneficiaries covered by large group health plans. The act also required that GAO determine the number of beneficiaries for whom Medicare became the secondary payer because of their own or a family member's employment. Overall, GAO estimates that during 1988, Medicare became the secondary payer for 340,000 disabled beneficiaries, or about 11 percent of the 3.1 million disabled Medicare beneficiaries.

Medicare: HCFA Can Reduce Paperwork Burden for Physicians and Their Patients (GAO/HRD-90-86, June 20, 1990)*

The paperwork required to process claims under Medicare is burdensome and confusing to many beneficiaries and care providers alike. This report examines the paperwork required in the claims process for Medicare Part B to see whether (1) opportunities exist to help providers submit complete claims, (2) notices to beneficiaries explain claims decisions clearly, and (3) electronic services like electronic mail could reduce paperwork.

Medicare: Improvements Needed in the Identification of Inappropriate Hospital Care (GAO/FEMD-90-7, Dec. 20, 1989)*

Over 31 million elderly Americans look to Medicare as their primary way of obtaining hospital care. In fiscal year 1988, payments for inpatient hospital services totaled \$51.9 billion. In the Medicare program, 54 Utilization and Quality Control PROs judge the appropriateness of hospital care given Medicare beneficiaries as well as other aspects of care, including the quality and accuracy of hospital classification decisions affecting reimbursement levels.

GAO found that PRO reviews of hospital care have typically identified a lower rate of inappropriate care than have reviews done by an independent HCFA contractor or by researchers. The criteria used to screen cases, the cases selected for review, and the lack of incentives for PROs to aggressively question the appropriateness of care all tend to decrease the rate of inappropriate hospital care uncovered by the PRO reviews. The main difference between private sector and PRO utilization review activities is timing. Private sector programs operate prospectively--that is, before admission, identifying patients who do not need hospitalization and referring them to more appropriate health care settings. Most PRO reviews, on the other hand, are done after the patient has been discharged from the hospital.

Medicare: Increase in HMO Reimbursement Would Eliminate Potential Savings (GAO/HRD-90-38, Nov. 1, 1989)*

On the basis of its review of the history of health maintenance organizations (HMO) Medicare reimbursement, GAO believes that raising the payment rate from 95 to 100 percent of the adjusted average per capita cost would be contrary to what the Congress envisioned. The Congress expected that paying HMOs 95 percent of the average per capita cost would cost 5 percent less than if enrollees remained under fee-for-service programs. Increasing the payment rate to 100 percent would eliminate any savings potential. The Congress was also concerned that inaccuracies in the adjusted average per capita cost could lead to excessive payments to HMOs. Recent studies, in fact, have concluded that Medicare beneficiaries enrolled in HMOs tend to be healthier and less costly to treat. They also concluded that the methodology used to calculate the adjusted average per capita cost does not accurately reflect these cost differences. Thus, rather than paying less, Medicare actually may have paid more for enrollees under HMO than had they remained in the fee-for-service sector. GAO believes that HMOs' payment rates should not be changed until these issues are resolved.

Medicare: Increased Denials of Home Health Claims During 1986 and 1987 (GAO/HRD-90-148R, Jan. 24, 1990)*

Medicare provides a home health care benefit for beneficiaries who are confined to their homes, under a physician's care, and in need of part-time intermittent skilled nursing care or physical or speech therapy. Congressional concern over increased denials of Medicare home health care claims during 1986 and 1987 prompted GAO to look into the situation. This briefing report addresses the reasons for the increased denials, the extent and causes of variation in denial rates among regions of the country, the number of home health agencies that lost their waiver of liability during this period, and the effects of the increased denials on the appeals process.

Medicare: Internal Controls Over Electronic Claims for Anesthesia Services Are Inadequate (GAO/HRD-90-49, Dec. 18, 1989)*

During its review of Medicare payments to anesthesiologists, GAO found that internal controls were inadequate for claims for anesthesia services submitted by electronic media like magnetic tape or disk. Controls over electronic claims at seven of eight carriers in GAO's review were not as effective as controls used in paying paper claims. When GAO sampled electronic claims at three carriers, GAO found computational errors that could have been detected had the controls for reviewing paper claims been employed. A subsequent audit by one of these carriers disclosed net overpayments to an anesthesiology group of about \$117,000. HCFA needs to improve its electronic media claims control policies and to review carrier compliance with such policies.

Medicare: Options to Provide Home Dialysis Aides (GAO/HRD-90-153, Aug. 31, 1990)*

Home Intensive Care, Inc., stopped providing aides to its home patients in February 1990, when the Omnibus Reconciliation Act of 1989 began limiting payments to suppliers of dialysis equipment and supplies to the amount that facilities receive for dialysis treatment. As a result, alternative dialysis sources had to be found for many of Home Intensive Care's home dialysis patients. HCFA found alternative dialysis sources for all 1,553 former home dialysis patients who received paid aides, although as of August 1990, 16 patients had not been placed with a permanent alternative source. GAO looked at the circumstances under which it might be appropriate to authorize Medicare payments for an aide under the end renal stage disease program when patients dialyze at home. GAO also reviewed increased indirect costs like transportation and day care incurred by Home Intensive Care patients after the firm stopped providing aides for home dialysis.

Medicare: Payments for Home Dialysis Much Higher Under Reasonable Charge Method (GAO/HRD-90-37, Oct. 24, 1989)*

GAO examined the payments Medicare was making to Home Intensive Care, Inc., for furnishing dialysis supplies and equipment to patients who receive kidney dialysis at home. GAO found that in Florida, where the majority of Home Intensive Care's Medicare claims are processed for payment, the firm received almost \$2,500 per home patient per month from Medicare. In contrast, dialysis facilities that served home facilities received about \$1,240 per month for serving home patients. A February 1989 HCFA analysis also concluded that total Medicare payments were higher for Home Intensive Care patients than for facility patients. GAO questions whether the additional payments are a prudent expenditure of Medicare funds and supports HCFA efforts to limit payments for home dialysis supplies and equipment.

Medicare: Second Status Report on Medicare Insured Group Demonstration Projects (GAO/HRD-90-117, June 6, 1990)**

HHS is authorized to conduct demonstrations of contracting on a prepaid capitation basis with Medicare Insured Groups to provide Medicare benefits to retirees. HCFA has been working for about 2 years to implement the demonstration projects. Currently, none of the projects has progressed further than the feasibility analysis phase. At the end of its feasibility analysis, Chrysler decided not to proceed with the demonstration, concluding that it would have been unprofitable. In addition, little progress has been made in the last year by Amalgamated or Southern California Edison. Neither company has developed a method of setting capitation rates that HCFA has approved. Both companies have received extension of the feasibility analysis phase of their cooperative agreements. In this second status report, GAO concludes that it is unclear when any Medicare Insured Group project will become operational.

Medicare: Statistics on the Part B Administrative Law Judge Hearings Process (GAO/HRD-90-18, Nov. 28, 1989)*

This report provides statistics on the administrative law judge portion of the Medicare Part B appeals process. Specifically, the report discusses the number of ALJ cases filed and their status, the outcome of cases by type of hearing sought, and the time required to complete the hearing process.

Medicare: Withdrawing Eyeglass Coverage Recommended Following Cataract Surgery (GAO/HRD-90-31, Feb. 8, 1990)*

Although Medicare does not cover conventional eyeglasses, an exception has been made for individuals who have undergone cataract surgery. The reasoning is that glasses in these cases are considered to be prosthetic devices. The goal of conventional eyeglasses for both cataract surgery patients and others is to improve focus for near or distance vision. Because Medicare generally prohibits payments for this purpose, GAO questions payments for beneficiaries who have had cataract surgery. In 1984 GAO recommended that Medicare drop coverage of conventional eyeglasses following cataract surgery. This report reiterates that recommendation. On the basis of 1987 payments, GAO estimates that its recommendation would save over \$98 million annually.

Medicare Catastrophic: Roll Back of Premiums on Schedule (GAO/INTEC-90-30, Mar. 16, 1990)*

GAO looked at the Social Security Administration's (SSA) efforts to stop withholding Medicare catastrophic coverage premiums. Although the Congress repealed most provisions of the Medicare Catastrophic Coverage Act of 1988 effective January 1, 1990, SSA was unable to stop withholding catastrophic coverage payments by that date without jeopardizing timely payment of Social Security benefits. The May 1990 Social Security checks will be the first not to have catastrophic coverage premiums withheld. Consequently, the Treasury will issue two refunds--one in February and one in April. The government will spend about \$49 million to return the excess withholding of \$572 million. SSA officials acknowledge that withholding premiums could have been stopped sooner if the agency's software programs for catastrophic coverage premiums had been better organized and easier to maintain. Reducing the time needed to reprogram SSA's computers might have eliminated the need for a second refund check, thereby lowering overall costs. The lack of well-organized, easy-to-maintain software is a long-standing problem that SSA is addressing in its efforts to overhaul its computer systems.

Nursing Homes: Admission Problems for Medicaid Recipients and Attempts to Solve Them (GAO/HRD-90-135, Sept. 5, 1990)*

Medicaid recipients have more difficulty getting into nursing homes than do higher paying private payers. Equalizing payment rates for the two groups, or reducing the difference between their payment rates, would improve access for Medicaid recipients. Establishing rates that are scaled to the severity of Medicaid recipient care needs would be another way to improve access for those with "heavy" care needs. Increasing Medicaid rates, however, would cost more money, and some states--citing competing demands for limited resources--question the affordability of such measures. To avoid higher Medicaid spending, some states have restricted the supply of nursing home beds, and, thereby, created a shortage. Faced with these shortages, some states have tried regulatory reforms, with uncertain effectiveness, to allocate existing beds so that Medicaid recipients and private payers have the same chance of getting an available bed.

Rural Hospitals: Federal Leadership and Targeted Programs Needed (GAO/HRD-90-67, June 12, 1990)*

Because of mounting financial pressures, many rural hospitals have closed in recent years, and many more are at risk of closing. There is widespread concern that many people, particularly elderly and low-income individuals, may have difficulty traveling to another facility to receive care. This report discusses strategies and programs at the state and federal levels to address the problems facing rural hospitals.

GAO concludes that because of the rapid changes in the health care industry and the complexity of the problems facing rural hospitals, it is unrealistic to expect that every rural hospital will remain open as a full-service facility. To help preserve rural residents' access to hospital care, GAO recommends that HHS (1) improve the monitoring of and technical support provided to sole community hospitals and (2) ensure that its Office of Rural Health Policy has the resources to monitor and evaluate the impact of federal efforts to assist rural hospitals. In addition, the Congress may wish to require that essential rural hospitals that are financially at risk be given priority when applying for federal grants.

Screening Mammography: Low-Cost Services Do Not Compromise Quality (GAO/HRD-90-32, Jan. 10, 1990)*/**

Every year breast cancer kills over 40,000 Americans, mostly women. The best tool available today for early detection is mammography, an x-ray that can find cancers too small to feel. While the Medicare Catastrophic Coverage Act of 1988 made screening mammography for symptom-free women a new Medicare benefit, it limited the charge for Medicare-funded screening to \$50. In looking at whether this limit could compromise women's ability to obtain quality services, GAO found that many providers lack adequate quality assurance programs. This may contribute to the wide range of image quality and patient radiation dose that occurs in mammography practice. GAO found no relationship between the price charged for screening mammography and adherence to quality standards. Providers with higher mammography volume, however, were more likely to comply with quality standards than were those with lower volume. There is evidence that high volume permits economies of scale and does not compromise quality. GAO found that the absence of legally binding quality standards has limited federal and state oversight programs. In September 1989, HHS published proposed regulations for Medicare-funded screening mammography that parallel professional quality standards. However, because the Congress repealed the Medicare Catastrophic Coverage Act of 1988, HHS will withdraw its proposed regulations.

INCOME SECURITY

ADP Systems: EEOC's Charge Data System Contains Errors but System Satisfies Users (GAO/INTEC-90-5, Dec. 12, 1989)*

GAO looked at whether the Equal Employment Opportunity Commission's (EEOC) Charge Data System can provide accurate, complete, and current data to EEOC in its administration and enforcement of the Age Discrimination in Employment Act. Concerns had been raised that the system may have been partly responsible for age discrimination complaints exceeding the statute of limitations before EEOC had completed its

investigations. Age discrimination cases in the Charge Data System data bases of the eight offices GAO visited contained some errors, but the users were largely satisfied with the system. These errors occurred because EEOC did not adequately verify the accuracy or completeness of data entered in the data bases or update the data bases with new or revised data. Although data base errors diminish the accuracy of system reports, they did not adversely affect the investigation of age discrimination complaints. None of the cases selected at random for GAO's analysis exceeded the statute of limitations. While EEOC's Director of Management was concerned about the error rates and said that EEOC recently had acted to reduce the level of error in the data bases, EEOC has not established a standard for an acceptable level of error. Establishing a cost-effective data accuracy standard and adhering to it is a reasonable and accepted practice among users of management information systems.

Age Discrimination: Use of Age-Specific Provisions in Company Exit Incentive Programs (GAO/HRD-90-87BR, Feb. 27, 1990)*

Age-specific provisions in company exit incentive programs either bar a certain group of older workers from program participation or exclude these workers from enhanced benefits available to younger eligible workers. Companies sometimes use short-term exit incentive programs to reduce their work forces when downsizing their operations. Although very few of the exit incentive programs GAO identified had age-specific provisions for eligibility, most used age-specific provisions for enhanced benefits. Specifically, GAO found that only 5 percent of the Fortune 100 company exit incentive programs used age-specific eligibility provisions. These programs used age brackets or set a cap on the age of workers to which the incentive was offered. GAO also found that a majority of existing incentive programs offered workers age-specific enhanced benefits.

District's Workforce: Annual Report Required by the District of Columbia Retirement Reform Act (GAO/GGD-90-70, Apr. 4, 1990)**

This report contains GAO's comments on a report by an actuary on the disability retirement rate of District of Columbia police officers and fire fighters. The District of Columbia Retirement Reform Act provides for annual federal payments to the D.C. Police Officers and Fire Fighters' Retirement Fund. These payments, however, must be reduced when the disability retirement rate exceeds an established limit. This is to encourage the D.C. government to control disability retirement costs. In GAO's opinion, the determination made by the enrolled actuary meets, in all material respects, the requirement of the law. Since the disability retirement rates calculated by the actuary are both less than 0.8 percent, no reduction is required in the fiscal year 1991 payment to the District's police and fire fighters' retirement fund.

Employee Benefits: Extent of Companies' Retiree Health Coverage (GAO/HRD-90-92, Mar. 28, 1990)*

Companies provide health coverage to active workers more often than they do to retirees. Only about 4 percent of companies provide retiree health coverage. However, because these companies tend to be larger, a relatively high percentage of people--about 40 percent of private sector employees--work for firms with retiree health coverage. Since 1984 fewer than 1 percent of companies have terminated a health plan that resulted in retirees or active workers losing their health coverage. Yet companies are trying to limit retiree health costs. Over one-third of companies with health plans for active workers or retirees require participants to help pay for coverage. Existing law provides limited protection to current and future retirees against company actions to reduce or terminate benefits. In addition, the proposal by the Financial Accounting Standards Board that companies recognize retiree health liabilities on their financial statements has caused some companies to reconsider whether they will be able to continue providing benefits. The Congress has several options if it decides to strengthen the security of retiree health benefits. These options range from (1) applying a full pension-type model, including requiring advance funding regulated by comprehensive legislation like the Employee Retirement Income Security Act of 1974, to (2) requiring companies with health plans to allow retirees under age 65 to purchase coverage at group rates similar to the coverage now provided by 1985 legislation.

Job Training Partnership Act: Information on Set-Aside Funding for Assistance to Older Workers (GAO/HRD-90-59FS, Jan. 22, 1990)*

Under Title IIA of the Job Training Partnership Act, funding has been set aside to help train and employ older workers. Seventy-eight percent of annual funding to states under this title is devoted to job training eligible people, including older workers, at the local level. In addition, 3 percent of the state allocation is set aside specifically to help economically disadvantaged older workers. This fact sheet provides information on the extent to which states have been able to spend their 3 percent set-aside funds. Information is also provided on the expenditure rate of other Job Training Partnership Act programs, for comparison, and the extent to which the act is serving older workers.

Pension Plans: Public Plans in Four States Have Generally Similar Policies and Practices (GAO/HRD-90-133, July 24, 1990)*

Some 2,400 public employee pension plans with over \$600 billion in assets cover 11.8 million workers in the United States. Public employee plans are exempt from the Employee Retirement Income Security Act of 1974, which protects plan participants and beneficiaries in the private sector. In response to concerns about the protections afforded public plan beneficiaries by state laws, this report provides information on public pension plans in four states. GAO discusses the plans' administrative organization; fiduciaries and their responsibilities; funding processes; investment policies and practices; and oversight, reporting, and disclosure. Overall, GAO found the pension plans for state and local government employees in the four states to be similar in many ways.

Pension Plan Terminations: Effectiveness of Excise Tax in Recovering Tax Benefits in Asset Reversions (GAO/HRD-90-126, July 13, 1990)*

To encourage savings for retirement, tax policy favors defined benefit and other pension plans. Federal law now permits sponsors to terminate their pension plans, pay each participant only the benefits that have built up to the termination date, and keep all the residual assets. Since 1980, it is estimated that reversions by employers in this way have amounted to \$20 billion.

GAO evaluated the 15-percent excise tax levied on employers who recover excess pension assets by terminating overfunded pension plans--called asset reversions--and found that it was not high enough to offset the tax benefit portion of pension asset reversions. According to GAO's analysis, the excise rates needed to fully offset pension tax benefits ranged from 17 to 59 percent. These offsetting excise tax rates were very sensitive to variations in the way different types of income were taxed. For example, plans that primarily obtained their investment income from sources normally subject to the maximum statutory rate, such as income from corporate bonds, had the highest offsetting tax rates.

Private Pensions: Impact of New Vesting Rules Similar for Women and Men (GAO/HRD-90-101, Aug. 21, 1990)**

For workers who change jobs, vesting in pension benefits can add to retirement income. Vesting--gaining the nonforfeitable right or entitlement to employer-provided pension benefits--is largely dependent on years of employment with the company sponsoring the plan. The Tax Reform Act of 1986 cut the maximum allowable vesting period in half for most workers in qualified private pension plans. The act targeted plans that were not "top-heavy," meaning those in which over 60 percent of the benefits or contributions go to company owners or other key employees. Prior vesting rules do not meet the needs of many workers who change jobs frequently and so do not vest in their pension plans. Women are one such group disadvantaged by these rules. GAO found that the vesting changes in the Tax Reform Act of 1986 will improve the vesting status of shorter-term workers, with a similar effect on women and men.

Private Pensions: Impact of Vesting and Minimum Benefit and Contribution Rules in Top-Heavy Plans (GAO/HRD-90-4BR, Oct. 23, 1989)*

A pension plan is top-heavy when more than 60 percent of the benefits or contributions go to company owners, officers, or other key employees. The Employee Retirement Income Security Act of 1974 set vesting rules for pension plans, governing the length of time before a participant earned a right to receive pension benefits. The Tax Equity and Fiscal Responsibility Act of 1982 added special rules for top-heavy plans that reduced the maximum time such plans could require for vesting, and increased the likelihood of shorter tenured workers receiving pension benefits. However, the Tax Reform Act of 1986 significantly lessened the vesting period for plans that were not top-heavy, calling into question the need for special rules for top-heavy plans.

Many more participants, men and women alike, would have had smaller or no vested benefits if the 1982 act's top-heavy vesting rules had been repealed and replaced with the 1986 act's vesting rules in the 55,000 top-heavy plans in GAO's pension database. However, the effect of this change in vesting status on participants' retirement income would likely have been small and would have occurred only if these participants left their jobs before being fully vested. Over one-half of the 26,000 plans and over two-thirds of the 142,000 participants represented in GAO's analysis were not affected by the top-heavy minimums. However, short-service participants (fewer than 3 years' service) appeared to be more likely than those with longer service to be affected by the defined benefit minimums after just 2 years under the top-heavy rules. Only about one-third of short service non-key participants--compared with over two-thirds of longer service participants--had accrued benefits greater than the minimum benefit and so were not affected.

Private Pensions: Spousal Consent Forms Hard to Read and Lack Important Information (GAO/HRD-90-20, Dec. 27, 1989)**

In congressional testimony, witnesses said that some husbands had, without consulting their wives, chosen pension options that paid higher benefits during their own lifetimes but did not provide a continuing benefit to their widows. In many cases, these women were left destitute. The Retirement Equity Act of 1984 now requires employers to obtain written consent from spouses of retiring workers who chose pension benefits payable only during their lifetimes.

GAO examined the content and readability of forms that companies use to meet the act's spousal consent requirement. These consent forms are an important source of information about survivor benefits for spouses as well as workers, particularly since many companies do not formally counsel workers nearing retirement and even fewer counsel spouses. Despite their importance, many of the forms GAO reviewed did not present all the information GAO believes spouses should have in making an informed decision about the survivor benefit option. Moreover, in GAO's opinion, the consent forms are too difficult for many spouses of retiring workers to understand. GAO believes that the Internal Revenue Service (IRS) should require employers to provide spouses with clearly written consent forms that explain the terms of the various pension benefit options and the consequences of rejecting the survivor benefits.

Reserve Forces: Opportunity to Reduce Pension Costs (GAO/NSIAD-90-152, Aug. 3, 1990)*

Reservists who have the years of service needed for retirement but have not reached retirement age can continue their membership and earn additional credits that are used to calculate their retirement pay. A Department of Defense policy directive, however, requires that reservists maintain a minimum level of participation or be transferred to either an inactive or a retired status in which they can no longer earn retirement credits. Despite this directive, the Army continues to give additional retirement credits to individuals who should have been transferred to an inactive or a retirement status. This also occurs to a lesser extent with the Air Force and the Navy. As of September 1989, almost 6,000 reservists had not met the minimum level of participation required in each of their two most recent service years. GAO estimates that the long-term cost of retirement credits earned by these reservists in their most recent service year could amount to about \$5.6 million.

Social Security: Alternative Wage-Reporting Processes (GAO/HRD-90-35, Nov. 8, 1989)*

GAO found that in millions of cases, wages reported by employers to IRS differed from wages reported to the SSA. This could lead to either lower social security benefits or underpayment of social security taxes for workers.

GAO studied the pros and cons of three different alternatives to the existing system of wage reporting. The first makes IRS rather than SSA responsible for receiving and processing reports. SSA now receives all earnings reports, processes them, and sends them to IRS. The second alternative relies on the unemployment compensation earning file, currently the responsibility of the Department of Labor and the states, to check wage data submitted to IRS and SSA. Under the third alternative, the existing process would be scrapped and replaced by a new entity that would receive and process wage data for IRS, SSA, and the states.

Although GAO concluded that there are advantages to each of the alternatives, none are compelling enough to warrant immediate changes to the existing wage-reporting process. Instead, GAO believes the changes being made by IRS and SSA to the process are a start in the right direction. Possibly the most significant initiative affecting the accuracy of SSA's earning files is SSA's new Personal Earnings and Benefit Estimate Statements, which would give workers a chance to review earnings posted to their Social Security account and to clear up any discrepancies.

Social Security: Many Administrative Law Judges Oppose Productivity Initiatives (GAO/HRD-90-15, Dec. 7, 1989)*

Individuals whose applications for Social Security disability or Medicare benefits have been denied may challenge such decisions before an administrative law judge. The number of appeals to ALJs has risen substantially over the years. SSA Office of Hearings and Appeals manages the ALJs. Over the years, many ALJs have opposed various management practices on the grounds that they interfere with decisional independence. This report examines (1) the causes of recent conflicts between the Office of Hearings and Appeals and the ALJs and (2) whether reductions in staff, especially in judges, adversely affected the adjudicative process.

Social Security: SSA Could Save Millions by Targeting Reviews of State Disability Decisions (GAO/HRD-90-28, Mar. 5, 1990)

SSA spent almost \$30 million in fiscal year 1988 reviewing disability decisions made by state disability determination services (DDS). These reviews are done mainly to (1) see whether accuracy standards have been met and (2) correct as many erroneous benefit allowances as possible.

GAO evaluated SSA's effectiveness in achieving this second objective. SSA selects all review cases randomly. While this is appropriate for the quality assurance sample that measures DDS accuracy, the preeffectuation review sample could produce better results if SSA targeted it to categories of cases most susceptible to incorrect DDS decisions. If SSA focused its sample on the more error-prone types of cases, like allowances of claims involving back injuries or chronic lung disease, it could correct more erroneous decisions than it does using a random approach, even with a lower volume of reviews. The current preeffectuation review of DDS continuances change very few DDS decisions. If the resources spent on those reviews were made available for targeted reviews of initial DDS allowances, substantially more incorrect benefit awards would be identified and reversed, with future benefit savings.

Tax Policy: Taxation of Pension Income for Retired New Jersey Police and Firefighters (GAO/GGD-90-73BR, Apr. 13, 1990)*

According to the New Jersey Policeman's Benevolent Association, police and firefighters have shorter life expectancies than do the general public. The association believes that if police and firefighters could use actuarial tables reflecting their shorter life expectancy, their taxable income and, therefore, their taxes in the early years of retirement would be less under current law.

In this briefing report, GAO evaluates the fairness of the actuarial tables used by IRS in computing taxable pension income. GAO also looks at the feasibility of using actuarial tables that take into account occupation and other factors. GAO found that the life expectancies of police and firefighters are essentially the same as those of the general public. In addition, GAO believes that developing separate tables would create a troublesome precedent since other occupational or demographic groups may request their own tables. GAO does recommend that IRS revise its publications to clarify when retirees can use the simplified rule to their advantage.

SOCIAL SERVICES

In-Home Services for the Elderly: Cost Sharing Expands Range of Services Provided and Population Served (GAO/HRD-90-19, Oct. 23, 1989)*

A growing number of state and area agencies on aging now charge some elderly clients for in-home services funded through private and government sources--a practice known as cost sharing. Agencies typically use cost sharing for services that are relatively expensive per client, such as adult day care and homemaker services. To preserve their commitment to serving the low-income elderly, cost-sharing agencies have employed protections like sliding fee scales.

GAO surveyed state and area agencies on aging and found that most had a positive attitude toward cost sharing. Agencies that cost share said that it (1) allows them to serve more elderly clients and provide a broader range of services and (2) is more likely to reduce any welfare stigma associated with agency services. Regardless of whether they had cost sharing, respondents generally favored legislation that would specifically authorize the practice.

VETERANS

Infection Control: VA Programs Are Comparable to Nonfederal Programs but Can Be Enhanced (GAO/HRD-90-27, Jan. 31, 1990)*

The Centers for Disease Control estimate that 5 percent of all patients who enter a hospital contract an infection during their stay. This means that 60,000 veterans could get infections each year while being treated at Department of Veterans Affairs (VA) hospitals. The 159 medical centers that VA operates throughout the United States are required to have an infection control program to identify existing infections and to prevent future ones.

In the course of its work, GAO found that the program guidance that VA issues to its medical centers was too broad to be helpful in assessing the infection control programs. GAO also discovered that no other U.S. health care organization had up-to-date and specific guidance.

Working with an infection control expert and with representatives of nine organizations, including the Centers for Disease Control, GAO put together a list of 56 basic elements of an effective infection control program. GAO found that both VA and nonfederal infection control programs are using most of these elements. Several of GAO's infection control elements, however, should be used by more practitioners in both the public and private sectors. These elements--such as coursework in hospital infection control programs and reporting of surgical wound infection rates to practicing surgeons--are generally more labor intensive than those in widespread use. To be most effective, VA programs also need management attention. VA infection programs are generally understaffed, not coordinated at the central office, and inadequately monitored by regional offices.

VA Health Care: Assessment of Surgical Services at Two Medical Centers in the Southwest (GAO/HRD-90-6, Dec. 14, 1989)*

In 1985 VA told its medical districts to review the performance of medical centers and to identify services that should be consolidated or eliminated. In GAO's review, VA's decisions to close inpatient surgical services at the Prescott Medical Center in Prescott, Arizona, and to retain them at the Big Spring Medical Center in Big Spring, Texas, appear reasonable. VA considered many factors, including workload and availability of alternative locations for inpatient surgery. In both cases, veterans could receive needed surgical services at other medical centers; however, the burden imposed by closure was far greater for Big Spring area veterans than for Prescott area veterans.

VA Health Care: Better Procedures Needed to Maximize Collection From Health Insurers (GAO/HRD-90-64, Apr. 6, 1990)*

Each year VA spends about \$10 billion on health care for veterans. Since 1986 VA has been able to collect from health insurers the cost of care provided to insured veterans. GAO found that collections so far have greatly exceeded costs. In fiscal year 1988, for example, VA spent about \$8 million to collect about \$100 million from health insurers. Yet GAO estimates that VA collected only about one-third of the total amount it could have collected.

GAO believes that VA centers could increase collections significantly if they (1) used more effective methods to identify insured veterans and bill insurers and (2) committed more resources to collection efforts. Centers are reluctant to make such a commitment for two reasons. First, all amounts collected must, by law, be returned to the U.S. Treasury. Second, the additional collection costs that centers incur are paid for out of their existing medical care budgets.

VA Health Care: Efforts to Assure Quality of Care in State Homes (GAO/HRD-90-40, Nov. 27, 1989)*

GAO found no basis to suggest that VA should require its medical centers to inspect state homes more frequently than it currently does (annually). GAO also found that VA has adequate procedures to assess the care state homes can provide. The procedures, however, were not always followed. In response to recommendations in a 1981 GAO report, VA revised its inspection guidelines to more closely conform to those used in HCFA's Medicare certification inspections. In addition, VA's central office now reviews all inspection reports to see that all standards have been addressed and that there are no omissions or clerical errors.

VA Health Care: Improvements Needed in Nursing Home Planning (GAO/HRD-90-98, June 12, 1990)*

VA faces a major challenge: how to meet the long-term care needs of a rapidly aging veteran population. The number of veterans 65 years and older is projected to grow to 9 million by 2000--a 50-percent increase over the 1988 level. VA's current goal is to provide 47,000 nursing home beds by fiscal year 2000, an increase of 14,000 beds over fiscal year 1988. GAO is concerned that because of inaccurate estimates, VA may add nursing home beds where they are not needed or fail to add them where they are needed.

VA Health Care: Medical Centers Need to Improve Collection of Veterans' Copayments (GAO/HRD-90-77, Mar. 28, 1990)*

VA is required to collect a fee, known as a copayment, from some veterans who receive health care at VA facilities. Unless they have a service-connected disability or there are special circumstances, veterans who have assets or income above a specified level must make the copayments.

GAO assessed whether VA's process for billing and collecting copayments is cost effective. Collections at VA's 159 medical centers exceeded costs, yielding a return of \$1.36 for each \$1 spent during fiscal year 1988. The centers' return for inpatient care was significantly higher than for outpatient care--\$1.74 compared to \$1.08.

The five medical centers GAO visited collected only about half of the copayments that veterans owed. This was mainly because the centers failed to bill these veterans. Some veterans, however, did not pay when billed. These bills were usually sent several weeks to months after care was provided, contributing to the centers' collection problems. GAO believes that VA centers need to improve their billing and collection practices in order to increase copayment collections and reduce collection costs. For instance, VA could follow the example of many private hospitals and collect from or make payment arrangements with patients before they leave the center.

VA Health Care: Nursing Issues at the Albuquerque Medical Center Need Attention (GAO/HRD-90-65, Jan. 30, 1990)*

GAO looked at several concerns--ranging from inadequate staffing and pay inequities to waste and loss of supplies and equipment--raised by nurses at the VA's medical center in Albuquerque, New Mexico. GAO found that management at the Medical Center has resolved many of these issues. Nurse vacancies and overtime have been reduced, pay issues have been addressed, the number of promotions and awards has increased, disciplinary actions have been reduced, the nursing home care unit is being renovated, and the number of beds operated in the facility has been reduced. In addition, VA has submitted a legislative proposal to the Office of Management and Budget that would address pay issues that cannot be handled at Center level.

While progress has been made in many areas, staff injuries, support services, paperwork, and acuity determinations need to be addressed more fully during the monthly meetings between management and the registered nurses' union. GAO believes an independent human resources specialist should be brought in to enhance the dialogue between the two groups. The medical center director also needs to actively participate in the meetings. In addition to the labor-management issues, center management must improve its internal controls over property. To eliminate any inconsistencies, management also needs to reexamine the physical requirements it places on nursing hires and nurses returning to work after an injury.

VA Health Care: Veterans' Concerns About Services at Wilmington, Delaware, Center (GAO/HRD-90-55BR, Feb. 8, 1990)*

GAO looked into veterans' concerns about health care services at the VA's Wilmington, Medical Center. Concerns were expressed about cleanliness at the center and about delays in obtaining care in the following areas: outpatient orthopedics, pharmacy, prosthetics, cardiology, speech therapy, and diagnostic testing. In November 1989, GAO reported that steps had been taken to address concerns in the cardiology and diagnostic testing areas. Waiting times from speech therapy and prosthetics did not seem to be a problem. In this report, GAO concludes that the medical center and headquarters officials have taken reasonable steps to address veterans' concerns about orthopedic care, pharmacy services, outpatient care, and housekeeping services.

Veterans' Benefits: VA Needs Death Information From Social Security to Avoid Erroneous Payments (GAO/HRD-90-110, July 27, 1990)

Each year, VA provides billions of dollars in disability compensation and pension benefits to veterans and their surviving spouses. Benefits should end promptly when a beneficiary dies; however, if surviving relatives or others are slow in reporting a beneficiary's death, substantial payment errors can result.

GAO matched VA benefit payment files with death information kept by SSA and found that in April 1989, VA paid about \$5.7 million to over 1,200 veterans who had been dead for at least 4 months; about 100 veterans had been dead for 10 years or more. GAO believes that VA and SSA need to establish a way to exchange information on deceased beneficiaries. Because many VA beneficiaries do not have social security numbers on file with VA, GAO recommends that the Congress authorize VA to require social security numbers of all veterans and their survivors as a condition of eligibility for VA compensation and pension benefits.

OTHER

Aging Issues: Related GAO Reports and Activities in Fiscal Year 1989 (GAO/HRD-90-56, Jan. 12, 1990)*

This report is a compilation of GAO's fiscal year 1989 work concerning older Americans. GAO looked at a wide range of issues--income security, health care, housing, nutrition, community and legal services, employment, and age discrimination among them. Appendixes in the report list the following types of GAO efforts: issued reports on policies and programs directed mainly at older Americans; issued reports on policies and programs in which the elderly were one of several target groups; testimony; ongoing activities; and other activities by GAO officials, like speaking engagements and publications. The report also notes that GAO policies prohibit age discrimination and that as of September 30, 1989, 54 percent of GAO's work force was 40 years of age or older.

Aviation Safety: Information on FAA's Age 60 Rule for Pilots
(GAO/RCED-90-45FS, Nov. 9, 1989)*

GAO looked at the Federal Aviation Administration's (FAA) regulation--known as the "Age 60 Rule"--prohibiting individuals age 60 or over from piloting large commercial aircraft. This fact sheet provides information on (1) the history of the rule; (2) exemption requests, including the number filed and granted; (3) the number of "special issuance" medical certificates granted to air transport pilots under age 60; and (4) studies on the rule. A list of the major court cases identified by FAA involving the Age 60 Rule is also provided.

Older Americans Act: Administration on Aging Does Not Approve Intrastate Funding Formula (GAO/HRD-90-85, June 8, 1990)*

The U.S. District Court for the Southern District of Florida ruled in 1987 that Florida's formula for distributing federal grants provided under Title III of the Older Americans Act for supportive and nutrition services was invalid. The court found that the formula not only failed to consider the needs of low-income minorities but also contained factors that discriminated against minorities.

GAO reviewed each state's Title III intrastate funding formulas and found, among other things, 20 formulas that contain a factor that was found to discriminate against minorities in the Florida case. While HHS's Administration on Aging, which is responsible for administering the act, reviews and comments on states' funding formulas, the agency believes that the act does not authorize it to approve or disapprove formulas. GAO is concerned that some state formulas may be causing funds to be distributed contrary to the intent of the act and its regulations. As a result, the Congress should consider clarifying whether the Administration on Aging should disapprove formulas the agency does not believe meet the intent of the act and its regulations.

FISCAL YEAR 1990 GAO REPORTS ON ISSUES
AFFECTING THE ELDERLY AND OTHERS

GAO issued 41 reports in fiscal year 1990 on policies and programs in which the elderly were one of several target groups. Of these, 7 were on food assistance, 13 on health, 6 on housing, 8 on income security, 5 on veterans' issues, and 2 on other issues. An asterisk after the report title indicates that the review was performed at the request of Committees or Members of Congress. Two asterisks indicate that the work was mandated by statute. When no asterisks are noted, the work was undertaken as part of GAO's basic legislative responsibility to audit and evaluate Federal agencies and programs.

FOOD ASSISTANCE

Food Assistance Programs: Recipient and Expert Views on Food Assistance at Four Indian Reservations (GAO/RCED-90-152, June 18, 1990)*

Indians on reservations receive food assistance primarily through the Food Stamp Program and the Food Distribution Program on Indian Reservations. This report provides the views of recipients and community officials on four reservations, collected through focus group interviews and panel discussions, regarding the (1) ability of Indians to participate in the programs, (2) impact of the programs on hunger and diet-related concerns on the reservations, and (3) adequacy of nutrition education provided by the programs.

According to the collective views of community officials, hunger exists on the four reservations. Hunger is more common among Food Stamp households than Food Distribution households because of program administrative hindrances and inadequate benefit levels. GAO also reported that recipients and community officials were concerned that the limited variety and poor quality of some Food Distribution Program foods and limited availability of nutrition education contribute to diet-related health problems, such as diabetes, obesity, hypertension, and heart disease.

Food Assistance: USDA's Implementation of Legislated Commodity Distribution Reforms (GAO/RCED-90-12, Dec. 5, 1989)

In recent years the commodity distribution program's goals of removing surpluses and providing a variety of nutritious foods to recipients has been in frequent conflict. The elderly, schools, and other recipients received quantities and kinds of food in a manner that increased storage and handling costs and hindered the effective use of the commodities. In response, the Congress mandated a broad range of 31 commodity distribution program reforms under the Commodity Distribution Reform Act and WIC Amendments of 1987 (P.L. 100-237). Sixteen of the reforms had legislated implementation deadlines. GAO found that 6 of the reforms were implemented ahead of schedule, and 10 missed their mandated dates for a variety of reasons.

Food Stamp Program: A Demographic Analysis of Participation and Nonparticipation (GAO/PEMD-90-8, Jan. 19, 1990)*

Why do some households that are eligible for food stamps not receive them? GAO found that in 1987 over 56 percent of eligible households did not participate in the Food Stamp program. Households receiving other welfare benefits were more likely to participate in the Food Stamp program. On the other hand, households receiving Social Security, those headed by the elderly, and those headed by both white and nonwhite single men were less likely to receive Food Stamps. The main reasons given for not participating in the Food Stamp program were (1) lack of interest in the benefits, (2) lack of information about the program, and (3) problems with the program or lack of access to it. Given that outreach efforts may be resumed under the Hunger Prevention Act, GAO believes states should be encouraged to target those groups that would most benefit from the program.

Food Stamp Program: Achieving Cost Neutrality in Washington's Family Independence Program (GAO/RCED-90-84, June 28, 1990)*

Breaking the "cycle of poverty" of welfare recipients has always been a central, but elusive, goal of welfare reform. In 1987 the Congress authorized the state of Washington to begin a 5-year demonstration project--the Family Independence Program--that combines several welfare programs, including Aid to Families With Dependent Children, Medicaid, and Food Stamps, into a single grant package for recipients. The hope is that a coordinated approach may work better in reducing recipients' long-term dependence on welfare. However, the authorizing legislation for the program requires the state to ensure that the cash approach is not more costly than the traditional coupon program.

GAO found that the 1987 act's requirement for assurances of cost neutrality probably cannot be fully satisfied. Instead, a reasonable approximation of program costs is likely the best that can be achieved. The current approach is for the state to estimate how much it would have cost to run a traditional Food Stamp Program and to use this estimate as a ceiling for the amount of aid the state can claim from the federal government. Between July 1988 and March 1989, the state claimed \$145.4 million for food benefit costs and administrative expenses, or about \$2.5 million below the total allowed under the ceilings. GAO has several problems with the methods used to set the program's benefit and administrative ceilings. GAO believes that using alternative methodologies could improve the accuracy of the calculations and better ensure that the cost-neutrality requirement is being met.

Food Stamp Program: Alternative Definitions of a Household for Food Stamp Eligibility (GAO/RCED-90-137, Aug. 23, 1990)*

Food stamp benefits are provided to households rather than to individuals; thus, a key factor in determining applicants' eligibility and benefits is how the household is defined. This report (1) describes how the definition of "household" evolved into its current complex form; (2) discusses whether the current definition contributes to homelessness in America; and (3) provides a range of alternative definitions and discusses their potential effects on participation and benefit payments, homelessness, and program simplicity.

Food Stamp Program: The Household Definition Is Not a Major Source of Caseworker Errors (GAO/RCED-90-183, July 26, 1990)*

Since food stamps are provided to households rather than to individuals, a key factor in determining an applicant's eligibility and benefits is how accurately caseworkers apply the household definition. The current definition of a food stamp household is complex, and state officials say that it is difficult to apply in computing food stamp benefits. However, GAO found that caseworkers made few mistakes and that applying the definition is not a major source of caseworker error: caseworkers nationwide made household definition errors in about 1 percent of the 80 million food stamp issuances in fiscal year 1988.

Food Stamp Automation: Some Benefits Achieved; Federal Incentive Funding No Longer Needed (GAO/RCED-90-9, Jan. 24, 1990)*

In fiscal year 1987, \$10.5 billion worth of food stamps were distributed. About \$1 billion of this was issued erroneously. To improve the program's administration and to combat rising costs, the Congress passed legislation in 1980 and 1985 encouraging automation of the food stamp program. State agencies have spent \$524 million since 1980 toward this goal.

GAO looked at (1) statewide food stamp automation programs in Vermont, North Dakota, Kentucky, and Texas and (2) three local food stamp automation programs in Texas and California. While GAO found that these efforts have improved some administrative procedures and caseload management and have helped workers avoid or detect program errors made when program eligibility is decided on, automation has not yielded all of the expected benefits in program administration, such as staff reduction. Some of these goals were beyond the capability of the automated systems.

Although millions of dollars were approved for state automation, GAO could not always determine costs because the five state agencies did not keep adequate records on the expenses of developing and operating each automated system. Additionally, the U.S. Department of Agriculture's Food and Nutrition Service did not always monitor state claims for cost reimbursement, resulting in overpayments to at least one state. Not one of the five states could account for all of the automation equipment purchased with federal funds, thereby increasing the risk of waste, fraud, and abuse. Because food stamp programs in all 50 states, the District of Columbia, Guam, and the Virgin Islands are now automated to some degree, GAO believes the 75-percent funding level established by the Congress to encourage state automation is no longer needed.

HEALTH

Defense Health Care: Potential for Savings by Treating CHAMPUS Patients in Military Hospitals (GAO/HRD-90-131, Sept. 7, 1990)*

Because of staff shortages, the military hospital system has considerable unused physical capacity, and beneficiaries are turning to civilian medical providers for health services. The Civilian Health and Medical Program of the Uniformed Services (CHAMPUS) picks up a major part of the tab for such treatment.

GAO found that the Department of Defense (DOD) can potentially save money by adding staff and equipment at military hospitals so they can treat more patients, rather than paying for their care under CHAMPUS. This conclusion tends to support expansion of military hospital capacity in the manner now being tested under several DOD health care initiatives. However, potential savings vary significantly by medical specialty and hospital; the savings could be great in some specialties and in some locations but negligible in others. GAO believes that DOD should identify facilities and specialties in which expansion of treatment capability is most likely to be cost-effective before it expands the current initiatives.

DOD Health Care: Funding Shortfalls in CHAMPUS, Fiscal Years 1985-9; (GAO/HRD-90-99BR, Mar. 19, 1990)*

GAO found that funding shortfalls for CHAMPUS have totaled \$1.8 billion over the past five fiscal years; an additional \$441 million funding shortfall is expected in fiscal year 1990. DOD projects no shortfall in fiscal year 1991 because of its efforts to reduce CHAMPUS costs.

In every year since 1986, DOD has requested less funds in its budget than it estimated the program was going to cost. These lower estimates have been a major contributor to the yearly CHAMPUS funding shortfalls. In addition, each Congress appropriates less money than DOD requests. Unexpected start-up costs for the CHAMPUS Reform Initiative and the extension of CHAMPUS care to Coast Guard beneficiaries also contributed to shortfalls in some years. DOD estimates of future CHAMPUS costs rely on projected savings from efforts to accommodate more of the CHAMPUS workload in the direct care system. If these efforts are unsuccessful, DOD may continue to experience substantial shortfalls.

Health Care: Limited State Efforts to Assure Quality of Care Outside Hospitals (GAO/HRD-90-53, Jan. 30, 1990)*

Over the last 20 years, medical procedures that have traditionally been done in hospitals, like cardiac catheterization, blood testing, and radiation therapy, are increasingly being done in "freestanding" facilities. GAO looked at state licensing, inspection, and endorsement for 16 types of freestanding providers, including ambulatory surgical centers, cancer treatment centers, and hospice care.

GAO found that states have been slow to license freestanding providers and, in fact, do not license most of the 16 types of freestanding providers GAO focused on. Even when such providers are licensed, states have imposed few sanctions for deficiencies cited during inspections. Further, states' plans for expanding licensing requirements to unlicensed providers are limited. Because of minimal state regulatory efforts, consumers have little assurance that unlicensed freestanding providers are offering quality care.

Health Care: Public Health Service Funding of Community Health Centers in New York City (GAO/HRD-90-121, Aug. 7, 1990)*

To receive funding under section 330 of the Public Health Services Act, public community health centers must have community governing boards that conform to certain requirements. This report provides information on the following centers in New York City that receive grants from the Public Health Service: Montefiore Hospital and Medical Center/Ambulatory Care Network, Bronx-Lebanon Hospital Center/Ambulatory Care Network, Lutheran Medical Center/Sunset Park Family Health Center, and St. Mary's Hospital/Family Health Care Network.

GAO found that none of the four centers had governing boards that complied with federal regulations for the section 330 program. In each case, the Public Health Service gave the center a chance to meet the requirements. Three of the four grantees later complied with the regulations; the fourth decided to make no changes and did not apply for a continuation grant. GAO also discusses the share of section 330 funds that the Public Health Service awarded to grantees in New York state during the 1980s.

Health Insurance: Cost Increases Lead to Coverage Limitations and Cost Shifting (GAO/HRD-90-68, May 22, 1990)*

Spiraling health care costs, growing competition from foreign firms, and basic changes in the health care marketplace have caused U.S. firms to reconsider the health care benefits they provide to their employees. For most full-time employees of larger companies, health benefits are still widely available. Nevertheless, even health benefits provided by some large firms are starting to erode. Companies are reassessing who and what are covered and how services are provided or insured. To reduce costs, firms have been limiting the number of people covered by their plans, hiring temporary or part-time workers who receive no health benefits, and limiting or eliminating retiree and dependent coverage. In addition, companies have been asking employees to pay a larger share of health care costs; introducing managed care or utilization review programs to reduce utilization of health care services; and, in the case of large firms, self-insuring. Self-insurance has frustrated state efforts to expand health care benefits through mandatory coverage requirements since employers that self-insure are exempt from these measures. Problems are more serious for small firms. Because of the relatively high costs for small firms, less than half of companies with 10 or fewer employees offer their workers health insurance. At the same time, insurance companies commonly deny health coverage to many of these employees because of preexisting health conditions.

Medicaid: Oversight of Health Maintenance Organizations in the Chicago Area (GAO/HRD-90-81, Aug. 27, 1990)*

Medicaid pays HMOs a fixed monthly amount per enrolled recipient to provide all health services covered by the program. Although this practice has the potential for containing health care costs, it also poses the danger of diminished quality of care should an HMO try to cut costs by reducing services to Medicaid recipients. A series of articles in the *Chicago Sun Times* alleging that Chicago-area HMOs had been providing poor care to Medicaid recipients prompted a GAO investigation of the situation.

GAO found that the incentive payment methods used by the largest Chicago-area HMOs to control use of health care services could jeopardize the quality of care provided to Medicaid recipients. Under the current payment system, physicians can be forced to pay the cost of some care out of pocket if the cost of patient care exceeds the amount they are paid to care for the patients. GAO is concerned that physicians could find themselves in situations (1) in which they might have to make decisions on patient care that could cost them money or (2) that would result in inappropriate reductions in services. GAO believes that stronger HMO management controls are needed in the Chicago area to help identify and prevent physician behavior that could harm the quality of care.

Mental Health Plans: Many States May Not Meet Deadlines for Plan Implementation (GAO/HRD-90-142, Sept. 18, 1990)**

GAO is required to evaluate states' implementation of the State Comprehensive Mental Health Services Plan Act of 1986 and report on that evaluation by September 30, 1990. This law requires states to plan and implement community-based care for their seriously mentally ill. It also directs the HHS to provide planning assistance. While GAO concludes that it is too soon to fairly and adequately assess implementation because states are not required to fully implement their plans until September 1991, GAO did examine state planning activities and assessed the National Institute of Mental Health's (NIMH) role in helping states develop plans.

GAO found that the states and NIMH have complied with the act's planning requirements. In addition, the act has achieved beneficial results, like greater involvement by the mentally ill, their families, and advocates in mental health planning, as well as more money for community mental health services. However, many states may have difficulties in meeting the act's implementation deadlines and, as a result, may be subject to cuts in block grant allotments in fiscal years 1991 and 1992.

Medical Device Recalls: Examination of Selected Cases (GAO/PEMD-90-6, Oct. 19, 1989)*

This report contains more descriptive analyses and profiles based on the data GAO collected for its August 1989 report (see GAO/PEMD-89-15BR). GAO did further analyses on two types of recalls: (1) those involving medical devices that the Food and Drug Administration (FDA) had approved for marketing through its premarket approval process (PMA) and had later recalled for design problems and (2) those that FDA classified as posing the most serious health risk (class I). GAO found 28 PMA-design and 48 class I recalls between fiscal years 1983 and 1988. These recalls, although accounting for only about 4 percent of all recalls for the period, have the most serious public health implications. Design problems were the most frequent reason for both PMA-design recalls and class I recalls. While no adverse health consequences were associated with the majority of PMA-design recalls or with 42 percent of the class I recalls, about one-third of the PMA-design recalls and over half of the class I recalls were associated with at least one patient's injury or death. There is no requirement that device manufacturers notify FDA of recalls, and GAO found that in many cases the agency was unaware of the recall until after it had started or even until it had been completed.

On the basis of the data presented in this report, GAO believes additional study of potential vulnerabilities in FDA's medical device premarketing approval and recall process is needed. Questions have been raised about the number of device recalls that remain unknown to FDA and about the timeliness of recall actions taken by FDA and manufacturers. When FDA was making critical decisions about recalls, reports of device problems had not been filed on nearly two-thirds of PMA-design and almost half of the class I recalls. As a result, the effectiveness of the medical device reporting regulation as an "early warning" of medical device problems is questionable. In testimony before the Congress, GAO summarized the findings of its two medical devices recall reports.

Military Health Care: Savings to CHAMPUS From Using a Prospective Payment System (GAO/HRD-90-136FS, July 13, 1990)*

This fact sheet details GAO's analysis of a prospective payment system--under which covered medical expenses are paid according to a predetermined rate schedule rather than according to hospital charges--adopted by the Civilian Health and Medical Program of the Uniformed Services. The prospective payment system is modeled on that used by Medicare and is designed to reduce government health care costs and to encourage hospitals to reduce their operating costs.

Minority Health: Information on Activities of HHS's Office of Minority Health (GAO/HRD-90-140FS, June 6, 1990)*

HHS Office of Minority Health was created in 1985 to focus on the health problem needs of minority groups, a fast-growing segment of the U.S. population. This fact sheet examines the Office's goals and objectives, funding, staffing, and program activities.

Nonprofit Hospitals: Better Standards Needed for Tax Exemption (GAO/HRD-90-84, May 30, 1990)*

Because of increasing pressure to contain costs, are some hospitals reducing indigent care and other charitable activities? Nonprofit hospitals have come under special scrutiny recently because of their preferred treatment as charities under the tax code. In the five states GAO reviewed--California, Florida, Iowa, Michigan, and New York--government-owned hospitals provided a disproportionate amount of uncompensated care, whereas both nonprofit and for-profit hospitals provided a smaller share of the states' uncompensated care. The burden of uncompensated care was not spread equally among the nonprofit hospitals in these five states. Large urban teaching hospitals had a higher share of the uncompensated care expense than did other nonprofit hospitals. Among the rest of the nonprofit hospitals, the tendency was for those with the highest operating margin (and, therefore, the greatest ability to finance charity care) to have the lowest rates of uncompensated care. About 80 percent of the nonprofit hospitals in these states reported total uncompensated care costs in excess of GAO's estimate of the value of their federal tax exemption. However, GAO found that in some states a far lower percentage incurred charity care costs in excess of GAO's estimate of the value of their tax exemption: 71 percent in New York and only 43 percent in California. GAO believes that if Congress wishes to encourage nonprofit hospitals to provide charity care and other community services, it should consider revising the criteria for tax exemption.

Quality Assurance: A Comprehensive National Strategy for Health Care Is Needed (GAO/PEMD-90-14BR, Feb. 21, 1990)*

How can the quality of health care be ensured under plans to expand health care coverage for the uninsured? GAO assembled a panel of eminent health policy researchers to address this question. The panel expressed the need for a national strategy for assessing and assuring the quality of health care. The panel viewed the following four elements as essential to a comprehensive national strategy: (1) national practice guidelines and standards of care; (2) enhanced data to support quality assurance activities; (3) improved approaches to quality assessment and assurance at the local level; and (4) national focus for developing, implementing, and monitoring a national system.

Rural Hospitals: Factors That Affect Risk of Closure (GAO/HRD-90-134, June 19, 1990)*

GAO found that closed rural hospitals tended to suffer substantial and increasing losses during the three years before they closed. Their losses were due primarily to their high cost per case relative to other, similar hospitals. Except for the smallest hospitals, losses on Medicare patients were less than losses on other patients. Contrary to popular perception, a hospital's location in a rural rather than an urban area did not increase its risk of shutting down. Rather, the factors that were associated with a higher risk of closure were low occupancy, small size, and ownership by a for-profit entity which are more prevalent in rural areas. This suggests that strategies for preventing rural closures should target hospitals with high-risk factors rather than all rural hospitals.

HOUSING

Assisted Housing: Rent Burdens in Public Housing and Section 8 Housing Programs (GAO/RCED-90-129, June 19, 1990)*

Under federal housing law, assisted households are usually required to pay 30 percent of their adjusted income for rent. By regulation, the Department of Housing and Urban Development (HUD) has interpreted "rent" to include shelter cost plus a reasonable amount for utility costs. This interim report looks at the proportion of income that assisted households pay for rent and utilities (called "rent burden") at six public housing agencies.

Homelessness: Changes in the Interagency Council on the Homeless Make It More Effective (GAO/RCED-90-172, July 11, 1990)*

GAO found that the Interagency Council on the Homeless has made significant changes in response to March 1989 congressional hearings. At those hearings, GAO testified that the Council had been slow to respond to what the Congress had characterized as an immediate and unprecedented homelessness crisis. In this report, GAO notes that the leadership of the Council's current chairman--the Secretary of HUD--has improved substantially. For example, by loaning 10 HUD employees to serve as the Council's regional coordinators on a nonreimbursable basis, the Chairman has strengthened the Council's field coordination efforts and has improved services to the homeless. About two-thirds of the state officials and local assistance providers GAO surveyed said that the current Council's improvement efforts were "somewhat" to "very effective." These individuals also thought that the Council should be reauthorized to continue coordinating these efforts. GAO found the Council's 1989 annual report to the Congress to be better than last year's publication because it focuses on the federal response to the homeless and addresses the levels of federal funding needed to combat the problem of homelessness.

Homelessness: McKinney Act Programs and Funding for Fiscal Year 1989 (GAO/RCED-90-52, Feb. 16, 1990)**

GAO is required to report annually on the status of programs authorized under the McKinney Act. The act, which seeks to establish a comprehensive program to help homeless people, now funds 18 programs that provide direct services for the homeless. This report outlines the act's legislative history; describes each of the act's programs; and details monies provided under each program, by state, for fiscal year 1989. Of the \$1.1 billion that the Congress appropriated for McKinney Act programs in fiscal years 1987 through 1989, the largest portion--around \$365 million--went to the Federal Emergency Food and Shelter Program, which gives food and shelter to needy people on an emergency basis.

Homelessness: McKinney Act Reports Could Improve Federal Assistance Efforts (GAO/RCED-90-121, June 4, 1990)*

This report describes the status of reports on programs for the homeless mandated by the McKinney Act. The act requires seven federal agencies and the Interagency Council on the Homeless to submit reports to the Congress on homelessness. Sixteen of the reports are a onetime requirement; 10 are required annually; and 1, a General Services Administration report meant to identify available surplus federal property for use by the homeless, is required quarterly. As of April 1990, 6 of the 16 onetime reports and 8 of the 10 annual reports for fiscal year 1988 had been issued.

GAO believes that these reports could give federal agencies and the Congress useful information on the effectiveness of programs in areas like housing and health care for the homeless. This information could be especially useful to the Congress as it considers reauthorization of the McKinney Act, which expires on September 30, 1990. However, each time that GAO has checked on overdue reports, HUD and HHS officials have changed the report issuance dates. Accordingly, it is important that these agencies brief the appropriate congressional committees on information contained in the reports. Further, these agencies need to work with the committees to establish new schedules for final reports.

Homelessness: Too Early to Tell What Kinds of Prevention Assistance Work Best (GAO/RCED-90-89, Apr. 24, 1990)**

Although no reliable national data exist, estimates of the homeless population in the United States range from 250,000 to 3 million. An even greater number may be at risk of becoming homeless due to eviction or mortgage foreclosure. Hundreds of state and local groups provide homelessness prevention assistance. Yet GAO could not determine the effectiveness of this assistance because few assistance providers have the resources to collect the client follow-up data needed for such evaluations. Prevention assistance usually takes the form of one-time rent, mortgage, or utility payments. Counseling may also be involved. While at least six federal programs provide funds in support of these efforts, state and local organizations decide whether to use funds for homelessness prevention or other

assistance, like emergency food and shelter for those who are already homeless. Even though many groups provide homeless prevention aid, the demand for their help is so great that some programs have run out of money or have had to cut back their assistance to individuals. GAO believes that collecting and evaluating data on the different types of assistance would help groups to target their limited resources to the most effective programs.

Rental Housing: Observations on the Low-Income Housing Tax Credit Program (GAO/RCED-90-203, Aug. 14, 1990)*

The Low-Income Housing Tax Credit Program--authorized in the Tax Reform Act of 1986--was intended to provide an incentive for investors to construct or rehabilitate low-income housing. This report provides information on the following: (1) the estimated cost to the Treasury of low-income housing tax credits awarded during 1987-89, (2) whether the awarded tax credits have resulted in reduced rents paid by tenants in credit-assisted units, (3) whether such tenants have been selected from waiting lists maintained by public housing authorities, (4) the adequacy of existing compliance monitoring requirements, (5) the adequacy of current statutory provisions designed to prevent noncompliance, and (6) alternative tax credit allocation formulas.

INCOME SECURITY

Disability Programs: Use of Competitive Contracts for Consultative Medical Exams Can Save Millions (GAO/HRD-90-141, Aug. 17, 1990)

Under SSA's disability programs, medical examinations of claimants seeking benefits are purchased when claimants' medical evidence is insufficient for disability determinations. State disability determination services, which SSA reimburses for 100 percent of those consultative examination costs, choose medical providers to do these examinations and determine the examination payments. Data on DDSs from New York and Oregon show substantial savings in consultative examination costs when competitively awarded contracts are used. GAO believes that SSA should work closely with state DDSs to identify areas in which competitively awarded contracts are feasible and to require their use, where appropriate, because of the potential for annual savings of millions of dollars.

Information Resources: Management Commitment Needed to Meet Information Challenges (GAO/IMTEC-90-27, Apr. 19, 1990)

As part of its ongoing general management review, GAO evaluated information resources management at VA. GAO found that top managers at VA do not have information readily available to assess the quality of health care or the effectiveness of services provided to veterans. VA information is contained in over 150 fragmented automated systems and in multiple, ad hoc manual systems. The information is neither efficiently collected nor easily accessed. These weaknesses have hindered VA's ability to effectively manage programs and have contributed to service delays. Because VA lacks a structured approach to systematically plan, prioritize, and implement its near- and long-term information needs, the agency cannot effectively evaluate its own performance and fix accountability. Individual agency components--medical, benefits, and national cemetery--have striven to automate and improve technology, but their autonomy hinders development of an integrated information resources management program at VA. Further, VA has not sufficiently developed or implemented policies to foster systems' integration and data sharing. VA has started to correct these deficiencies by streamlining its central information resources management organization and by developing a process that would include strategic planning. But remaining challenges will require continued VA commitment and support.

Pension Benefits: Processing of Applications by the Pension Benefit Guaranty Corporation (GAO/HRD-90-127, Sept. 25, 1990)*

GAO reported to the Congress on four cases involving pension benefit applications processed by the Pension Benefit Guaranty Corporation (PBGC). Established by the Employee Retirement Security Act of 1974 (ERISA), PBGC administers an insurance program that guarantees participants' earned benefits at plan termination. PBGC insures nearly 40 million workers in approximately 102,000 private pension plans. Two of the cases reviewed by GAO involved denials of benefits that were

subsequently reversed. GAO concurred with the reversals. In the third case, GAO agreed that denial of benefits was warranted. In the fourth case, GAO determined that IRS' delays in processing requests for information were causing delays in benefit payments to PBGC plan participants. IRS subsequently revised its policy to ensure that PBGC receives requested information within 90 days.

Social Security Disability: Denied Applicants' Health and Financial Status Compared With Beneficiaries' (GAO/HRD-90-2, Nov. 6, 1989)**

The Social Security Disability Insurance Program is the main source of income replacement for the nation's workers who cannot work because of disabling health conditions. Each year, about 1 million people apply for benefits and about 30 percent are awarded them. Overall, GAO found that both Social Security disability beneficiaries and denied applicants are not well-off in terms of employment, health, and financial status. Almost all of the applicants who were allowed Social Security disability benefits in 1984 said they were not working at the time of GAO's survey in 1987. Over half of the applicants who were denied benefits during the same period also reported not working. In general, the self-reported health status of denied applicants as a group was slightly better than that of the allowed population. However, when separating the denied applicants into those who were working and those who were not, GAO found that the health status reported by the nonworking denied applicants resembled that of allowed applicants; both were significantly worse than that of denied applicants who were working. As of 1987, about two-thirds of former beneficiaries who had been determined by SSA, between 1981 and 1984, to be ineligible for benefits had been reinstated on the benefit rolls. Of those who remained ineligible, over half had returned to work, but many had no health insurance.

Social Security: Resolving Errors in Wage Reporting (GAO/HRD-90-11, Oct. 17, 1989)*

GAO examined SSA's efforts to reconcile cases in which employers reported lower amounts of wages to SSA than to IRS. GAO found that SSA has been able to reconcile some cases by telephone that it had been unable to reconcile by its usual method--by mail. SSA's telephone success rate, however, was much less than that initially estimated by two internal studies. This was because the study samples provided unreliable estimates and because the resolution of some cases was incorrectly attributed to telephone reconciliation rather than to other SSA activities. SSA now reconciles employers only if wage-reporting differences are at least \$500,000--an arbitrary threshold.

However, GAO's work indicates that SSA could increase the chances of obtaining previously unreported wage information by devoting more effort to reaching employers (1) whose whereabouts are known to SSA and (2) who had recently submitted wage reports to SSA indicating that they were still in business and might have information needed to resolve the reporting problem. This could improve SSA's success rate and reconcile some cases below the current \$500,000 threshold without increasing SSA's commitment of resources.

Social Security: Direct Mail Solicitations by the Social Security Protection Bureau (GAO/HRD-90-9, Jan. 26, 1990)*

The Social Security Protection Bureau is a private organization that offers to obtain earnings and benefit information from SSA and to lobby Washington on members' behalf. The bureau's benefits, however, have been criticized as dubious. For example, while people paying the \$7 membership fee are helped in obtaining earnings information from SSA, this information is available from the government free of charge.

GAO's report contains information on (1) the income of the parent firm--the Watson & Hughey Company--and its organizational links with the bureau and other affiliated organizations; (2) bureau services; (3) bureau operations and their legality under federal laws; and (4) miscellaneous information, including the costs incurred by SSA and actions being considered or taken by state governments against the bureau.

Social Security: IRS Data Can Help SSA Credit More Wages (GAO/HRD-90-112, Aug. 31, 1990)

Each year, employers report to SSA the wages paid to their employees on form W-2. SSA then credits the wages to each worker's social security account. As of June 1989, however, about 178 million wage reports worth about \$138 billion of uncredited earnings were recorded in SSA's suspense file. Over the past 5 years, the file has grown by \$58.2 billion, or 73 percent.

GAO believes that SSA could reduce the size of the suspense file and credit more workers' wages by using independently developed IRS data to identify to whom the uncredited earnings belong. About one-third of the resolutions could be almost immediately credited to valid accounts with little cost to SSA. The remaining resolutions would require further research efforts, but the IRS data should provide SSA with a good starting point.

Social Security: Taxing Nonqualified Deferred Compensation (GAO/HRD-90-82, Mar. 15, 1990)*

In this report, GAO looks at whether self-employed taxpayers use deferred income arrangements that achieve similar income tax treatments as plans called "nonqualified deferred compensation plans" used by employers and employees. These nonqualified plans are basically employer IOUs to pay employees future benefits in return for current services. GAO also looks at how the imposition of the social security tax on employees using these kinds of plans differs from its imposition on self-employed taxpayers for similar types of income.

VETERANS

Management of VA: Implementing Strategic Management Process Would Improve Service to Veterans (GAO/HRD-90-109, Aug. 31, 1990)

With an annual budget of about \$30 billion, the Department of Veterans Affairs provides a range of services to America's veterans, including medical, housing, insurance, education, income, and burial assistance. Through affiliation with medical schools and support of research that benefits veterans' health care, VA also educates and trains many of the nation's medical practitioners. VA faces many challenges today, chief among them outdated VA medical facilities and a swiftly aging veteran population. GAO's management review (1) identifies lessons learned from past VA departmentwide strategic management processes and (2) develops a flexible secretarial-level strategic management process that could be adapted to VA.

Veterans' Compensation: Medical Reports Adequate for Initial Disability Ratings but Need to Be More Timely (GAO/HRD-90-115, May 30, 1990)*

GAO's review of veterans' initial claims for disability compensation showed that (1) VA regional offices requested medical examinations for the appropriate medical impairment and (2) the medical reports addressed all claims for compensation made by veterans. The medical reports contained diagnoses that were adequately supported by clinical tests and procedures and physical examinations done by VA physicians. With few exceptions, these reports provided enough medical evidence to allow VA medical and nonmedical rating board specialists to judge the extent of a veteran's disability and assign disability ratings for compensation. On the other hand, medical reports often do not meet VA timeliness standards.

VA Health Care: Delays in Awarding Major Construction Contracts (GAO/HRD-90-91, Apr. 5, 1990)*

VA's appropriation for fiscal year 1989 contained funding for 18 major construction projects, each estimated to cost \$2 million or more. The appropriation required that (1) working drawings contracts for these projects be awarded by September 30, 1989, and (2) construction contracts be awarded by September 30, 1990. VA's appropriation for fiscal year 1988 contained funding for 15 other projects for which construction contracts were to be awarded by September 30, 1989. VA is required to inform the Congress and GAO of the projects that did not meet these time limits.

GAO believes that VA's February 1990 letter to congressional committees and to the Comptroller General includes all projects that were required to but did not have working drawings or construction contracts awarded by September 30, 1989. GAO also believes the contracting delays for the 17 construction projects included in VA's letter do not constitute an impoundment of

budget authority under the Impoundment Control Act. VA's actions show no intent to refrain from using the funds. VA officials attributed the delays to several programmatic considerations, including changes in the projects' scope or design and receipt of bids that exceeded the funds available. VA has awarded or expects to award contracts for 14 of the 17 projects by September 30, 1990.

Veterans' Benefits: Improved Management Needed to Reduce Waiting Time for Appeal Decisions (GAO/HRD-90-62, May 25, 1990)*

During fiscal year 1989, VA paid about \$15 billion for disability benefits and processed about 700,000 initial or reopened claims for these benefits. About 60,000 veterans appealed the decisions on their claims. However, in 1989 the average processing time for appeals decided by the Board of Veterans Appeals was 463 days--an increase of 44 days, or 11 percent, over 1988. Such untimely appeals delay financial, medical, and other benefits to which veterans are entitled. GAO found that improved management could reduce appeal processing time. This report details the management weaknesses identified.

Veterans' Benefits: VA Acts to Improve Quality Control System (GAO/HRD-90-161BR, Sept. 24, 1990)*

This briefing report discusses actions taken by VA in response to recommendations made in an April 1989 GAO report. These recommendations involve the statistical quality control system that VA runs for compensation, pension, and burial programs. GAO found that VA has fully implemented the recommendations. VA now requires regional offices to select sample cases randomly for system reviews and to review cases for the same month they are selected. In addition, VA has improved the central office role by (1) having its reviews to validate regional system reviews cover the same time period and types of processing actions as the regional reviews and (2) enforcing regional office compliance with central office requirements to report corrective action planned or taken for periods of sustained unacceptable quality. As recommended, VA has also developed measures of claims processing quality for individual programs. VA is taking steps to respond to two other recommendations.

OTHER

Low-Income Home Energy Assistance: Legislative Changes Could Result in Better Program Management (GAO/HRD-90-165, Sept. 7, 1990)**

Under the Low-Income Energy Assistance Program (LIEAP), states assist eligible households in meeting costs associated with home heating and cooling needs. Heating assistance makes up over 75 percent of program expenditures. GAO identified two issues concerning LIEAP funding that suggest a need for possible congressional action to help HHS and the states better manage this program. First, use of a forward funding arrangement would make LIEAP funds available in time to allow HHS to tell states exactly how much money they would receive before they open their winter heating programs. Second, providing for some discretionary funding flexibility would enable HHS to quickly respond to unanticipated increases in home heating costs due to severe weather or a sharp rise in fuel prices.

Management of HHS: Using the Office of the Secretary to Enhance Departmental Effectiveness (GAO/HRD-90-54, Feb. 9, 1990)

Secretaries of HHS shoulder responsibilities for budgets totaling hundreds of billions of dollars, for hundreds of programs, and for decisions that affect the health and welfare of millions of Americans. This management review of HHS concludes that the lack of an effective management system within the Office of the Secretary has hampered the ability of HHS Secretaries to manage their tremendous responsibilities. GAO believes such a system should help Secretaries understand and identify emerging policy and management issues, establish clear goals and objectives for these issues, and develop strategies to accomplish the goals and objectives. The system must also include accountability dimensions that enable the Secretary to monitor and track the Department's progress in achieving its goals and objectives, oversee the operation of programs and activities that have been delegated to others, and provide feedback to and communicate with the Department's components.

FISCAL YEAR 1990 TESTIMONY RELATING TO
ISSUES AFFECTING THE ELDERLY

GAO testified 35 times before congressional committees during fiscal year 1990 on issues relating to older Americans. Of the testimonies, 4 were on food assistance issues, 14 on health issues, 5 on housing issues, 9 on income security issues, 1 on a social services issue, and 2 on veterans' issues.

FOOD ASSISTANCE

Adequacy of Nutrition Programs on Indian Reservations, by Flora H. Milans, Associate Director for Food and Agriculture Issues, before the Senate Committee on Agriculture, Nutrition and Forestry and before the Senate Select Committee on Indian Affairs (GAO/T-RCED-90-30, Feb. 20, 1990)

GAO testified on its findings regarding the Department of Agriculture's food assistance programs. While the Food Stamp program along with commodity foods have helped improve the diet of Indians, GAO found evidence of hunger on the four reservations it visited. Indians attributed the hunger to (1) obstacles in applying and qualifying for food stamps, (2) heavy reliance on federal programs that are not intended to provide a full diet for most households, (3) procedural requirements of the Food Stamp program that influence the size and delivery of benefits, and (4) high food prices that erode the purchasing power of food stamp benefits. Of greater concern to those GAO spoke with is the prevalence of diet-related problems like obesity, diabetes, heart disease, and hypertension. Even healthy individuals have concerns about the limited variety and poor quality of some commodity foods; for participants with diseases that require special diets, these foods can present serious problems. GAO believes better access to food assistance, an adequate and nutritious diet, and proper nutrition education could improve the quality of life on the reservations.

GAO Audit of the Food Stamp Program, by John W. Harman, Director of Food and Agriculture Issues, before the Subcommittee on Domestic Marketing, Consumer Relations, and Nutrition, House Committee on Agriculture (GAO/T-RCED-90-10, Oct. 31, 1989)

In this testimony, GAO discusses its past and present work on (1) food stamp automation, (2) alternatives to the current definition of a food stamp household, and (3) ways to improve the benefit opportunities for people eligible for the Food Stamp program.

GAO Audits of the Commodity Food Area, by John W. Harman, Director of Food and Agriculture Issues, before the Subcommittee on Domestic Marketing, Consumer Relations, and Nutrition, House Committee on Agriculture (GAO/T-RCED-90-15, Nov. 15, 1989)

GAO testified on the commodity food area, which is administered by the Department of Agriculture's Food and Nutrition Service. GAO discussed its recent work on (1) the commodity distribution program reform mandated by 1987 legislation and (2) the commodity food distribution program at four Indian reservations. GAO found that USDA has implemented all of the legislated reforms, although some of the statutory implementation time frames were missed because of the lengthy review and approval procedures, the complexity of the reforms, and the law's broad application. GAO concluded that the Food Stamp program, along with commodity foods and nonfederal food assistance, has improved the diet of Indians living on or near the reservations. However, during its work, GAO was told by tribal officials about hunger at two of the reservations and GAO found a prevalence of diet-related diseases, such as diabetes, heart disease, and hypertension. GAO concludes that an adequate food supply and nutrition education could help improve the quality of life for Indians on these reservations.

Views on Temporary Emergency Food Assistance Program and Commodities for Soup Kitchens, by John W. Harman, Director of Food and Agriculture Issues, before the Senate Committee on Agriculture, Nutrition, and Forestry (GAO/T-RCED-90-69, Apr. 18, 1990)

This statement for the record contains information GAO gathered on the effectiveness of two programs extended or authorized by the Hunger Prevention Act of 1988--USDA's Temporary Emergency Food Assistance Program and a new program to provide commodities to soup kitchens or food banks. In summary, USDA and state officials told GAO that USDA's management of commodity purchases seems to be working effectively after program start-up delays. Recipient agency officials said they were generally satisfied with the amounts, types, and delivery schedules of the commodities received. GAO lists suggestions by state and local officials as well as by recipients for improving the programs.

HEALTH

Employee Benefits: Trends in Retiree Health Coverage, by Joseph F. Delfico, Director of Income Security Issues, before the Subcommittee on Retirement Income and Employment, House Select Committee on Aging (GAO/T-HRD-90-51, July 27, 1990)

Company-sponsored health plans are a main source of health care coverage for retirees. This health care coverage is especially important to retirees under age 65, because most are ineligible for Medicare. Out of an estimated 96 million private sector workers, about two-thirds lack retiree health coverage. For the other one-third of the work force with such benefits, GAO testified that the security of company-sponsored retiree health plans is in question. GAO estimates that since 1984, fewer than 1 percent of companies have terminated retiree health benefits. However, at an increasing rate companies have been shifting costs to retirees or reducing benefits. Retirees now receiving health benefits and active workers who expect to receive these benefits upon retirement currently have few legal protections from corporate cost cutting. GAO believes that the Congress may have to take explicit action if it wants to preserve company-sponsored retiree health benefits.

HCFA Needs Better Assurance That Hospitals Meet Medicare Conditions of Participation, by David P. Baine, Director of Federal Health Care Delivery Issues, before the Subcommittee on Health, House Committee on Ways and Means (GAO/T-HRD-90-44, June 21, 1990)

HCFA relies on the Joint Commission on Accreditation of Healthcare Organizations to identify and resolve problems in hospitals serving Medicare patients. However, HCFA lacks assurances that the hospitals surveyed by the Joint Commission are complying with Medicare requirements. While HCFA is unsure of the extent to which it can direct the Joint Commission to change its accreditation process to meet HCFA's needs, GAO believes that HCFA should try to guide the Joint Commission to ensure that hospitals meet Medicare requirements. If such efforts are unsuccessful, alternatives to the present system of accreditation can be considered. However, because none of the alternatives appears to be clearly superior to the present system, GAO discusses several different options for improving the system.

Long-Term Care Insurance: Proposals to Link Private Insurance and Medicaid Need Close Scrutiny, by Lawrence H. Thompson, Assistant Comptroller General for Human Resources Programs, before the Subcommittee on Health and the Environment, House Committee on Energy and Commerce (GAO/T-HRD-90-55, Sept. 14, 1990)

Several state demonstration projects have been proposed to coordinate private long-term care insurance with Medicaid. The goal of the projects is to see whether the promotion of long-term care insurance for the elderly will yield long-term care protection without increasing public sector costs. Although the projects vary significantly, most propose allowing people who buy a qualifying private long-term policy to become Medicaid-eligible after the policy pays for a period of long-term care costs. Participants would not have to "spend down" or deplete as much of their savings as is now required to meet Medicaid eligibility thresholds. GAO believes that the proposed projects could reduce the financial hardships that some elderly endure as a result of catastrophic long-term care costs. On the other hand, risks would be involved if the projects are given authority to link private insurance coverage with Medicaid.

Medical Devices: The Public at Risk, by Charles A. Bowsher, Comptroller General of the United States, before the House Committee on Energy and Commerce (GAO/T-PEMD-90-2, Nov. 6, 1990)

and

Medical Devices: Underreporting of Problems, Backlogged System, and Weak Statutory Support, by Eleanor Chelimsky, Assistant Comptroller General for Program Evaluation and Methodology, before the House Committee on Energy and Commerce (GAO/T-PEMD-90-3, Nov. 6, 1990)

GAO analyzed two types of recalls: (1) those involving medical devices that FDA had approved for marketing through its premarket approval process and had later recalled for design problems and (2) those that FDA classified as posing the most serious health risk (class I). GAO found 28 PMA-design and 48 class I recalls between fiscal years 1983 and 1988. These recalls, although accounting for only about 4 percent of all recalls for the period, have the most serious public health implications. Design problems were the most frequent reason for both PMA-design recalls and class I recalls. Although no adverse health consequences were associated with the majority of PMA-design recalls or with 42 percent of the class I recalls, about one-third of the PMA-design recalls and over half of the class I recalls were associated with at least one patient's injury or death. There is no requirement that device manufacturers notify FDA of recalls, and GAO found that in many cases the agency was unaware of the recall until after it had started or even until it had been completed.

On the basis of these data, GAO believes additional study of potential vulnerabilities in FDA's medical device premarketing approval and recall process is needed. Questions have been raised about the number of device recalls that remain unknown to FDA and about the timeliness of recall actions taken by FDA and manufacturers. When FDA was making critical decisions about recalls, reports of device problems had not been filed on nearly two-thirds of PMA-design and almost half of the class I recalls. As a result, the effectiveness of the medical device reporting regulation as an "early warning" of medical device problems is questionable.

Medicare: Effects of Budget Reductions on Contractor Program Safeguard Activities, by Janet L. Shikles, Director of Health Financing and Policy Issues, before the Subcommittee on Health, House Committee on Ways and Means (GAO/T-HRD-90-42, June 14, 1990)

How vulnerable is the Medicare program to waste, abuse, and mismanagement? GAO focused on the insurance companies that contract with the government to process and pay claims for Medicare-covered services. In recent years, the funding available for carrying out claims processing and payment safeguard activities has not kept pace with the growth of the program. GAO testified that the ability of Medicare contractors to ensure the accuracy of program payments has deteriorated seriously. In GAO's view, attempting to save administrative costs by reducing funding for payment safeguard activities is penny-wise and pound-foolish because safeguards tend to save the Medicare trust fund \$11 for every \$1 spent. GAO believes that increased funding is needed in this area.

Medicare: GAO Views on Medicare Payments to Health Maintenance Organizations, by Janet L. Shikles, Director of Health Financing and Policy Issues, before the Subcommittee on Health, House Committee on Ways and Means (GAO/T-HRD-90-27, May 8, 1990)

When it enacted Medicare's current HMO risk-contract payment system, the Congress intended both to offer an HMO option to a wider set of Medicare beneficiaries and to save Medicare program funds. The fixed payment amount for Medicare HMO enrollees was intended to be, on average, 5 percent less than the expected Medicare cost if the enrollees had remained in the fee-for-service sector. GAO is concerned that increasing the payment rate from 95 to 100 percent of the adjusted average per capita cost would eliminate any potential for savings. There was also concern in the Congress that inaccuracies in the adjusted average per capita cost could lead to excessive payments to HMOs.

In GAO's view, this concern seems well founded in light of recent studies that concluded that Medicare beneficiaries enrolled in HMOs are healthier and tend to use fewer health care services--and are thus on average less costly to treat--than non-HMO beneficiaries. The studies also found that the methodology used to calculate the adjusted average per capita cost does not accurately reflect these cost differences. Therefore, rather than paying less, Medicare may have paid HMOs more than if the same enrollees had remained in the fee-for-service sector. In addition, GAO found serious problems in the way HCFA had implemented the payment safeguard mechanism--the adjusted community rate--intended to ensure that HMOs do not receive windfall profits from inaccuracies in the adjusted average per capita cost process.

Medigap Insurance: Expected 1990 Premiums After Repeal of the Medicare Catastrophic Coverage Act, by Janet L. Shikles, Director of Health Financing and Policy Issues, before the Senate Special Committee on Aging (GAO/T-HRD-90-9, Jan. 8, 1990)

The Congress repealed the Medicare Catastrophic Coverage Act in November 1989. As a result, private insurance--known as Medigap policies--must now provide benefits that insurers did not expect to provide in 1990. GAO surveyed 29 commercial Medigap insurers, each with at least \$10 million in earned premiums or Medigap policies in 1987. The 20 insurers that responded said they expected to raise their 1990 Medigap insurance premiums by an average of 19.5 percent. The companies attributed about half of this increase to increased benefits and administrative costs necessitated by repeal of the act. The rest of the increase was attributed to inflation, increased use of medical services, prior years' claim experience, and other factors. The Blue Cross and Blue Shield Association also surveyed its member organizations and found that the median increase in 1990 nongroup Medigap insurance premiums would be about 29 percent.

Medigap Insurance: Expected 1990 Premiums After Repeal of the Medicare Catastrophic Coverage Act and 1988 Loss Ratio Data, by Janet L. Shikles, Director of Health Financing and Policy Issues, before the Subcommittee on Medicare and Long-Term Care, Senate Committee on Finance (GAO/T-HRD-90-11, Feb. 2, 1990)

Following the Congress' repeal of the Medicare Catastrophic Coverage Act in November 1988, GAO surveyed 29 commercial insurers about their 1990 Medigap premiums. The 20 insurers that responded said they expect to increase their 1990 premiums by an average of 19.5 percent. Blue Cross and Blue Shield also surveyed its member organizations and found that the median increase among the 38 respondents for nongroup Medigap insurance premiums would be about 29 percent in 1990. After repeal of the act, the National Association of Insurance Commissioners revised its model regulation and minimum benefit standards for Medigap policies. These measures now protect consumers from some abusive sale and marketing practices and require policies to cover more policyholder expenses, like Part B coinsurance after the beneficiary has paid the annual deductible of \$75. GAO also testified on whether loss ratios met or exceeded minimum standards for insurers.

Medigap Insurance: Premiums and Regulatory Changes After Repeal of the Medicare Catastrophic Coverage Act and 1988 Loss Ratio Data, by Janet L. Shikles, Director of Health Financing and Policy Issues, before the Subcommittee on Health, House Committee on Ways and Means (GAO/T-HRD-90-16, Mar. 13, 1990)

GAO testified on its recent survey of 29 commercial Medigap insurers about their 1990 premiums for Medigap insurance. The 20 insurers that responded said they expected to raise their 1990 premiums for Medigap insurance by an average of 19.5 percent. The companies attributed about half of this increase to higher benefits and administrative costs necessitated by repeal of the Medicare Catastrophic Coverage Act. GAO also discussed the percentage of premiums paid out as benefits (the loss ratios) in 1988 and recent changes in federal and state regulatory requirements for Medigap policies. GAO identified several options for amending federal Medigap standards that could improve consumer protection and the economic value of Medigap policies.

Medigap Insurance: Proposals for Regulatory Changes and 1988 Loss Ratio Data, by Janet L. Shikles, Director of Health Financing and Policy Issues, before the Subcommittee on Commerce, Consumer Protection, and Competitiveness and before the Subcommittee on Health and the Environment, House Committee on Energy and Commerce (GAO/T-HRD-90-35, June 7, 1990)

GAO testified on H.R. 4840, the Medigap Fraud and Abuse Protection Act of 1990. This bill would expand consumer protections for the elderly who purchase Medigap insurance and would expand policy premiums and benefits during times that a policyholder is also eligible for Medicaid. GAO believes that enactment of this proposed legislation would go a long way toward improving consumer protections for purchasers of medigap insurance. In GAO's view, the bill would also improve the economic value of this insurance. GAO also discussed 1988 loss ratio data.

National Institute of Health: Problems in Implementing Policy on Women in Study Populations, by Mark V. Nadel, Associate Director of National and Public Health Issues, before the House Select Committee on Aging (GAO/T-HRD-90-50, July 24, 1990)

The National Institutes of Health (NIH) has made little progress in implementing its policy to encourage the inclusion of women in research study populations. Although the policy first was announced in October 1986, guidance for implementation was not published until July 1989, and the policy was not applied consistently before the 1990 grant review cycles. Because implementation of the policy began so late, GAO could not determine its effects on the demographic composition of study populations. Furthermore, there is no readily accessible source of data on the demographics of NIH study populations, either from the NIH Director's office or from the institutes.

Potential Expansion of the CHAMPUS Reform Initiative, by David P. Baine, Director of Federal Health Care Delivery Issues, before the Subcommittee on Military Personnel and Compensation, House Committee on Armed Services (GAO/T-HRD-90-17, Mar. 15, 1990)

GAO examined two issues related to DOD's CHAMPUS Reform Initiative demonstration project: (1) the progress made in overcoming obstacles in implementing the initiative in California and Hawaii and (2) the adequacy of support for expanding the initiative into Arizona, Nevada, and New Mexico. GAO testified that DOD and its principal contractor--Foundation Health Corporation--have substantially improved claims processing, resource sharing efforts, and financial management over the past year. However, GAO believes that any decision to expand the initiative should be delayed until there is more convincing evidence that the initiative is saving money--a key DOD element for judging its success. A delay would also allow DOD to determine whether the Foundation Health Corporation's progress under the contract is being sustained.

Quality of Care Provided Medicaid Recipients by Chicago-area HMOs, by Janet L. Shikles, Director of Health Financing and Policy Issues, before the Subcommittee on Health and the Environment, House Committee on Energy and Commerce (GAO/T-HRD-90-54, Sept. 14, 1990)

In a series of articles running in October 1987, the Chicago Sun-Times alleged that Chicago-area HMOs provided poor quality care to Medicaid recipients. Medicaid pays the Chicago-area HMOs a fixed monthly amount for each enrolled recipient to cover his or her health services. Although this practice has significant potential for containing health care costs, it also poses the danger of diminished quality of care. On the basis of its earlier report (GAO/HRD-90-81, Aug. 27), GAO testified that effective quality assurance mechanisms are not in place in the Chicago-area program to counterbalance the strong financial incentives given to HMO physicians to underserve Medicaid patients. Further, the effects of such incentives on patient care cannot be adequately assessed until the HMOs fully and accurately document the medical care services provided and an effective system is developed to analyze the utilization data gathered.

HOUSING

Homelessness: Status of the Surplus Property Program, the Interagency Council on the Homeless, and FEMA's EFS Program, by John M. Ols, Jr., Director of Housing and Community Development Issues, before the Senate Committee on Government Affairs (GAO/T-RCED-90-98, July 19, 1990)

GAO testified on its work related to provisions of the McKinney Homeless Assistance Act. The Surplus Property Program, which is designed to identify surplus federal property available for homeless shelters, needs improvement. GAO believes that the government needs to be sure properties are truly surplus and available to homeless assistance providers before publicizing them as such, and that comprehensive federal guidance on how to obtain federal properties should be developed. GAO found that changes made by the Interagency Council on the Homeless have significantly improved the Council's services and operations; that review is detailed in an earlier report (GAO/RCED-90-172, July 11). Finally, GAO's review of the Emergency Food and Shelter Program administered by the Federal Emergency Management Agency revealed that funds are now reaching assistance providers in a more timely fashion than GAO reported previously.

Low-Income Housing Tax Credit Utilization and Syndication, by John M. Ols, Jr., Director of Housing and Community Development Issues, before the Subcommittee on HUD/Moderate Rehabilitation Investigations, Senate Committee on Banking, Housing, and Urban Affairs (GAO/T-RCED-90-73, Apr. 27, 1990)

Use of the low-income housing tax credit program has steadily grown since the program began, and today the program has become the nation's primary effort to encourage low-income housing production. GAO's testimony discussed three issues: (1) the amount of low-income housing tax credits allocated to states and awarded to projects for 1987 through 1989 and the number of low-income housing units developed in connection with these awards, (2) the syndication process used to help raise capital to finance low-income housing projects that have been awarded tax credits, and (3) the net amount of equity capital raised through the syndication of projects awarded tax credits relative to the amount of the credit award.

If the tax credit program is to be continued on either a temporary or a permanent basis, GAO believes that adequate controls need to be developed to ensure that projects that receive credits are maintained and operated in accordance with program requirements. Projects that have been awarded credits should be carefully monitored to ensure that they continue to qualify for the annual credits by serving low-income families. These efforts should help discourage program abuses.

Potential Losses From the Rental Housing Inventory: Soundness of Current Estimates, by Eleanor Chelmsky, Assistant Comptroller General for Program Evaluation and Methodology, before the Subcommittee on Housing and Community Development, House Committee on Banking, Finance and Urban Affairs (GAO/T-PEMD-90-8, Feb. 28, 1990)

In recent years, several studies have suggested that, as private owners end their participation in federal housing programs by prepaying their mortgages, many federally subsidized rental units could be lost from the low- and moderate-income housing inventory. GAO testified on the preliminary results of its efforts to measure potential losses of federally subsidized units. GAO's findings suggest that the prepayment problem is closely tied to the opportunities available to property owners in a particular local market. For example, in the tight housing markets of Boston and Los Angeles, almost all the owners GAO spoke with would like to prepay as soon as possible; however, in low demand markets like Denver and Houston, owners were far less likely to be interested in prepaying.

Use of Housing Subsidies, by John M. Ols, Jr., Director of Housing and Community Development Issues, before the Subcommittee on HUD/Moderate Rehabilitation Investigations, Senate Committee on Banking, Housing, and Urban Affairs (GAO/T-RCED-90-34, Feb. 27, 1990)

Its review of Sierra Pointe, a moderate rehabilitation project in Clark County, Nevada, leads GAO to conclude that there is a real danger of providing too much financial assistance to a developer when multiple subsidies are awarded to individual projects without a review of the total amount of assistance. For Sierra Pointe, a 160-unit project, GAO estimates that the developer realized cash flows of about \$1.8 million, or about 22 percent, above the cost to acquire and rehabilitate the project. GAO also believes there is a real danger of using subsidies inefficiently. It is inefficient to use the Moderate Rehabilitation Program and tax credits in housing markets that already have an adequate supply of rental housing. When Sierra Pointe was approved and during its development, GAO estimates that at least 160 suitable rental units would have been available to house low-income families. GAO has also reviewed seven other projects and is finding that it would have been more economical to have relied on existing housing using Section 8 certificates rather than on producing more units through a combination of moderate rehabilitation and tax credit subsidies.

Utility Allowances Provided to Public Housing and Section 8 Households and Resulting Rent Burdens, by John M. Ols, Jr., Director of Housing and Community Development Issues, before the Subcommittee on Housing and Community Development, House Committee on Banking, Finance and Urban Affairs (GAO/T-RCED-90-41, Mar. 7, 1990)

GAO testified on housing allowances provided to public housing and section 8 housing. Specifically, GAO discussed (1) the extent of utility allowances provided to those households, (2) the resulting rent burdens of households that receive these allowances, and (3) options available for changes.

INCOME SECURITY

Audits of Employee Benefit Plans Need to Be Strengthened, by David L. Clark, Associate Director for Financial Management Systems and Audit Oversight, before the Subcommittee on Labor, Senate Committee on Labor and Human Resources (GAO/T-AFMD-90-25, July 24, 1990)

GAO testified on the role that independent public accountants play in auditing employee benefit plans covered by the Employee Retirement Income Security Act of 1974 (ERISA). Effective controls are necessary to safeguard the nation's employee benefit plans against mismanagement, fraud, and abuse. Independent public accountants are in a prime position to ensure that such safeguards are working to protect the interests of plan participants and the government. To that end, GAO believes that current audit provisions should be strengthened to more effectively use independent public accountants as an oversight and enforcement mechanism under ERISA.

Federal Government's Oversight of Pension and Welfare Funds, by Joseph F. Delfico, Director of Income Security Issues, before the Subcommittee on Oversight, House Committee on Ways and Means (GAO/T-HRD-90-37, June 13, 1990)

The Internal Revenue Service and the Department of Labor are responsible for ensuring that pension plans, with about \$2 trillion in assets, and welfare benefit plans comply with ERISA. Their efforts have a significant impact on ensuring that employee benefit plans are free of mismanagement, fraud, and abuse. Of particular concern to GAO are the effectiveness of federal oversight of employee benefit plans that are essential to the well-being of millions of Americans, and the government's potential exposure to underfunding in pension plans insured by the Pension Benefit Guaranty Corporation. This underfunding is now estimated at between \$20 billion and \$30 billion in specific large plans. GAO testified on (1) the effectiveness of IRS' and Labor's ERISA enforcement programs and (2) Labor's proposals to enhance ERISA enforcement by strengthening independent public accountant audits.

Social Security: Comments on S.2453--The Social Security Restoration Act of 1990, by Joseph F. Delfico, Director of Income Security Issues, before the Subcommittee on Social Security and Family Policy, Senate Committee on Finance (GAO/T-HRD-90-29, May 11, 1990)

GAO has testified on most of the bill's provisions in the past. This testimony focused on provisions dealing with the hearings and appeals process, establishing a minimum staffing level at SSA, and changes to telephone access at SSA. GAO believes that the current appeals process takes too long. While S.2453 would shorten the process, GAO is concerned about the costs and services involved. Before proceeding, GAO believes that the process should be tested in several locations to determine potential costs. GAO supports reassessing staff levels to determine if reallocations due to staff imbalances can solve staff needs. Finally, GAO is concerned that the bill's proposal to list local SSA office phone numbers in the telephone book might undermine the new 800 system.

Social Security: Employment and Health Status of Social Security Denied Applicants, by Joseph F. Delfico, Director of Income Security Issues, before the Senate Special Committee on Aging (GAO/T-HRD-90-48, July 17, 1990)

The Social Security Disability Insurance Program is the main source of replacement income for workers who cannot work because of disabling health conditions. GAO summarized in testimony its 1987 survey of disability applicants who were denied benefits in 1984: over two-thirds of these nonworking denied applicants said they had been out of work for at least 3 years, and 54 percent did not expect to work again. The self-described health status of denied applicants resembled that of beneficiaries, with most members of both groups reporting poor or fair-to-poor health.

GAO testified that these findings raise questions about the criteria used to determine an applicant's ability to work and about the determinations themselves. GAO noted that an applicant's residual functional capacity was the principal point of disagreement between state disability adjudicators who made initial decisions and administrative law judges to whom initial decisions are appealed. GAO believes that budget constraints during the past few years may be contributing to a decline in the quality of disability decisions, particularly denial decisions: from 1986 to 1989, the number of cases processed increased 12 percent while staff-years decreased 13 percent.

Social Security: Many Administrative Law Judges Oppose Productivity Initiatives, by Gregory J. McDonald, Associate Director for Income Security Issues, before the Subcommittee on Social Security, House Committee on Ways and Means (GAO/T-HRD-90-39, June 13, 1990)

SSA employs more than 700 administrative law judges (ALJs) in 132 hearing offices around the country to hear appeals of applications for social security or Medicare benefits that have been denied. These ALJs are unique federal employees in that they make decisions on administrative proceedings of the agency that employs them. Historically, SSA has used a monthly disposition goal to encourage the ALJs to decide more cases. Many of the ALJs, however, complain that SSA's emphasis on productivity has had a negative effect on their work. GAO's testimony focused on the issues of (1) performance goals and (2) staffing levels of both ALJs and support staff.

Social Security: Service to the Public--Accuracy of the 800 Phone Service, by Joseph F. Delfico, Director of Income Security Issues, before the Senate Special Committee on Aging (GAO/T-HRD-90-30, May 18, 1990)

Each year more than 60 million people call SSA's 800 number for a variety of reasons. GAO testified on SSA's methodology for evaluating the accuracy of information being provided to the public over the 800 line. GAO also discussed SSA's progress in stopping the withholding of Medicare catastrophic coverage premiums.

Social Security: Taxing Nonqualified Deferred Compensation, by Lawrence H. Thompson, Assistant Comptroller General for Human Resources Programs, before the House Committee on Ways and Means (GAO/T-HRD-90-21, Apr. 5, 1990)

GAO testified on whether self-employed taxpayers use deferred income arrangements that achieve similar income tax treatments as plans called "nonqualified deferred compensation plans" used by employers and employees. These nonqualified plans are basically employer IOUs to pay employees future benefits in return for current services. GAO also provided information on how the imposition of the social security tax on employees using these

kinds of plans differs from its imposition on self-employed taxpayers for similar types of income.

The Question of Rolling Back the Payroll Tax: Unmasking the Deficit Illusion, by Charles A. Bowsher, Comptroller General of the United States, before the Senate Committee on Finance (GAO/T-HRD-90-10, Feb. 5, 1990)

In the view of the Comptroller General, the use of growing Social Security surpluses to mask the federal deficit amounts to "blue smoke and mirrors". This practice has encouraged avoidance of the hard choices that must be made if the government is to bring its fiscal operations closer to balance. The current Social Security financing plan requires workers to pay a higher payroll tax than would be necessary under a pay-as-you-go system. While workers are left with the impression that this tax is being used to build reserves that will help pay for their future benefits, in fact the reserve is an illusion--a way to finance other general fund expenditures that we seem unwilling to ask taxpayers to pay for explicitly.

The illusion must end, and facts must be faced. GAO urges the Congress to take the steps necessary to ensure that the reserve accumulation has real economic meaning. The nation's political leadership must find a way to negotiate a multiyear, politically sustainable budget strategy. GAO hopes Senator Moynihan's tax rollback proposal will be the catalyst for such action.

The Social Security Administration's Supplemental Security Income Outreach Activities, by Joseph F. Delfico, Director of Income Security Issues, joint hearing before the Subcommittee on Retirement Income and Employment, House Select Committee on Aging (GAO/T-HRD-90-22, Apr. 5, 1990)

The Supplemental Security Income program provides financial support to the aged, blind, and disabled who have limited income and resources. Since the program began in the mid-1970s, there has been concern that many people who are eligible for the program are not participating. SSA, which administers the program, uses various outreach methods like radio, television, and speeches to increase awareness of the program.

However, GAO testified that more needs to be done to determine which outreach mode is the most effective. GAO surveyed SSA district office managers, a number of whom believe that not enough outreach is being done because of a lack of staff. GAO's survey also found that outreach for the non-English speaking needs particular attention. In addition, GAO testified on its evaluation of various Supplemental Security Income outreach demonstration projects sponsored by the American Association of Retired Persons.

SOCIAL SERVICES

Older Americans Act: Dissemination of Research and Demonstration Findings Could Be Improved, by Joseph F. Delfico, Director of Income Security Issues, before the Subcommittee on Human Resources, House Select Committee on Aging (GAO/T-HRD-90-53, Sept. 11, 1990)

To spur ideas on how to improve services for the elderly, Title IV of the Older Americans Act provides discretionary funds to the Administration on Aging (AOA) to sponsor research and demonstrations projects. To be effective, however, project results need to be disseminated to agencies serving the elderly. GAO surveyed state agencies on aging in all 50 states and the District of Columbia and found that almost all are aware of some research and demonstration results. Moreover, most states' agencies use this information in shaping their programs and operations. However, GAO found that AOA disseminates results in an ad hoc and haphazard way and does not monitor how these results are used. State officials believe that the AOA could improve dissemination by publishing a summary of the results of completed Title IV projects and by conducting more conferences and seminars.

VETERANS

VA Health Care Cost Recoveries, by Edward A. Densmore, Director of Planning and Reporting in the Human Resources Division, before the Subcommittee on Hospitals and Health Care, House Committee on Veterans' Affairs (GAO/T-HRD-90-40, June 20, 1990)

In April and May of 1990, GAO reported on efforts by VA to (1) collect from insurers the cost of health care provided to veterans without service-connected disabilities and (2) collect fees, generally referred to as copayments, from veterans who have income or assets above prescribed limits. While VA's collections exceeded its recovery costs, VA had the potential to collect substantially more than it did--perhaps another \$223 million. Ineffective procedures and a reluctance to spend the resources needed to maximize recoveries contributed to missed collection opportunities.

In this testimony, GAO notes that VA has already responded to GAO's recommendations by (1) developing a comprehensive plan to improve its recovery procedures and (2) proposing legislation to improve the financing of its recovery efforts. GAO believes that VA is on the right road to realizing more fully its health care cost recovery potential.

Veterans' Benefits: VA Needs Death Information From Social Security to Avoid Erroneous Payments, by Gregory J. McDonald, Associate Director for Income Security Issues, before the Senate Committee on Veterans' Affairs (GAO/T-HRD-90-28, May 18, 1990)

VA provides about \$15 billion in disability compensation and pension benefits each year. When a beneficiary dies, payments should cease. However, GAO found that in April 1989 VA made payments to over 1,200 veterans who, according to SSA records, were dead. About 100 of these veterans had been dead for 10 years or more. SSA receives death information from many sources, including employers and funeral homes. It also buys death certificate information from the states. While federal agencies like VA are authorized to obtain and use this information to ensure that payment records are correct, VA currently does not do so on a routine basis.

GAO testified that SSA and VA should establish a system to routinely share this information. GAO also indicated its support for S.1110, proposed legislation that would authorize VA to require social security numbers for its compensation or protected pension programs.

APPENDIX IV

APPENDIX IV

ONGOING WORK AS OF SEPTEMBER 30, 1990
RELATING TO ISSUES AFFECTING THE ELDERLY

At the end of fiscal year 1990, GAO had 108 ongoing jobs that were directed primarily at the elderly, or had older Americans as one of several target groups. Of these, 2 were on food assistance issues, 46 on health issues, 10 on housing issues, 40 on income security issues, and 10 on veterans' issues.

FOOD ASSISTANCE

The Effectiveness of Survey Methodology, Planning, and Implementation of USDA's Nationwide Food Consumption Survey

The Quality of Canned Meat Procured by USDA for Commodity Distribution Program

HEALTH

Alternative Enforcement Actions Needed to Assist HCFA in Assuring That Hospitals Comply With Medicare Requirements

Analysis of the Effectiveness of Medicare Automated Data Processing (ADP) Systems

Characteristics of the Uninsured in Selected States

Drug Utilization Reviews Under State Medicaid Prescription Drug Programs

Effect of Medicare's Durable Medical Equipment Fee Schedule on Program Payments and Alternative Payment Approaches

Electronic Medical Records: Analysis of Costs, Benefits, Impediments, and Risks in the Federal Hospital Community

Evaluation of Medicare Payments to Physicians for Medically Directing Nurse Anesthetists

Evaluation of Special Medicare Payments for Anesthesia Modifier Units

HCFA and Joint Commission Efforts to Assure Hospitals Meet Medicare's Requirements

HCFA's Internal Controls Over Payments to Peer Review Organizations

HCFA's Use of Review Screens to Control Medicare Payments

Hospitals' and Trauma Centers' Billing Practices for Medicare Trauma Cases

Impact of Applying Home Health Cost Limits by Discipline

Management of the Medicare Part B Carrier/Processor Transition Process

Medical Practice Guidelines: The Experience of Medical Specialty Societies

Medicare Overpayments Identified Under the Medicare Secondary Payer Provisions

Medicare Payments for Durable Medical Equipment

Medicare Peer Review Organization Administrative Requirements Imposed on Hospitals

Medicare Provider Audits

Medigap Insurance and Employer Maintenance-of-Effort Actions Under Medicare Catastrophic Coverage

Off-Label Drugs: A Study of Reimbursement for Cancer Patients' Care

OBRA-86 Secondary Payer Provision: Evaluation of Savings and Effects on Disabled Medicare Beneficiaries

Outpatient Surgery: A Survey of Medicare Patient Outcomes

Private Sector Initiatives in Managed Care: Lessons for the Medicare Program

Recovery of Medicare Part B Overpayments

Review of Independent Clinical Laboratories' Profits Under the Medicare Fee Schedule

Review of Medicaid Drug Acquisition Costs and Overhead Costs of Retail Pharmacies

Review of Medicaid Third Party Liability Recoveries From Insurance Located Outside the Home State

Review of Medicare Payments to Anesthesiologists

Review of Medicare's Professional Review Organization Program for Health Maintenance Organizations

Review of Medicare's Use of Beneficiary Complaints to Detect Waste and Abuse

Review of Michigan's Medical Malpractice Arbitration Program

Review of Recoveries for Medicaid Services Covered by Private Insurers in Michigan

Review of the Appropriateness of Medicare Payments for Durable Medical Equipment

Survey of Alternative Resolution Procedures for Medical Malpractice Claims Involving Services Provided Through Medicare

Survey of Alternative Ways of Reimbursing Physicians' Malpractice Insurance Premiums Associated With Services Provided to the Elderly and Disabled and Paid for by Medicare Part B

Survey of Factors Influencing Medicare Hospital Costs and Payments

Survey of Long-Term Care Insurance Policyholder Protection

Survey of Medicaid Third Party Liability

Survey of Medicare's HMO Rate Setting Methodology

Survey of Methods Used to Fund Community Health Centers

Survey of Need to Establish a Heat Wave Warning System

Survey to Determine the Magnitude of Medicare Credit Balances and the Impact on the Medicare Program

The Efficacy-Effectiveness Interface: A Methodology for Determining "What Works" in Medicine

Variation in HCFA Regions' Interpretations of Medicaid Coverage of Substance Abuse

Ways in Which the Federal Government Can Complement Staff Efforts to Improve Access to Health Care Centers

HOUSING

Access to McKinney Act Programs Improved But Better Oversight Needed

Chronically Mentally Ill in Public Housing and Their Impact on Elderly Tenants

Evaluation of Processing Delays in the Section 202 Elderly Housing Program

How Effective is the Federal Surplus Personal Property Donation Program?

HUD's Plans and Progress to Address Problems Surfaced in the Past Year

Review of Mentally Disabled Tenants in Public Housing and Their Impact on Elderly Tenants

Review of the Effectiveness of HUD's Supportive Housing Demonstration Program

Review of the Elderly's Use of Housing Vouchers as Compared With Other Forms of Assisted Housing

Status of the Surplus Property Program, The Interagency Council on the Homeless, and FEMA's EFS Program

Use of Surplus and Underutilized Federal Property for the Homeless

INCOME SECURITY

Adequacy of SSA Procedures for the Use of Medical Advisors in Hearings and Appeals Decisions

Analysis of a Proposal to Privatize Social Security Trust Fund Reserves

Benefit Distribution in Small and Large Employers' Pension Plans

Briefing Report on Program Characteristics of the Low-Income Home Energy Assistance Block Grant

Differences Between Men's and Women's Pensions at Retirement After Adjusting for Difference in Salary and Tenure

Effects of Fractional Accrual Rule on Equity of Private Pension Plan Benefits

Ensuring Income Security for the Elderly: Federal/State Roles and Coordination of Community Support Services

Equal Employment Opportunity Commission: Management of Age Discrimination Charges to Prevent Lapses

Evaluation of SSA Debt Management Practices

Follow-Up Study to Analyze How and Why SSA Denied Disability Benefits to Many Severely Impaired Applicants

How Effective Is SSA's Effort to Assist SSI Applicants Apply for Food Stamps?

How Should the Amount of Tax Revenues Owed to the Social Security Trust Funds Be Determined?

Impact of Companies Filing for Bankruptcy on Retiree Health Benefits

IRS Enforcement of the Employee Retirement Income Security Act of 1974

Junk Bond Holdings by Pension Funds

Georgia's Compliance with Administrative Cost Provisions of LIHEAP Legislation

Leveraged Buy-Outs Effect on Pension Benefit Security

Management of VA: Human Resource Management Vital to Success of the Secretary's Strategic Management Process

Office of Hearings and Appeals' Processing of Medicare Appeals

Older Americans Act: State Voluntary and Mandatory Elder Abuse Reporting Systems

Review of Employee Stock Ownership Plans

Review of Financial Assumptions Used in Estimating Defined-Benefit Pension Plans' Liabilities

Review of Low-Income Home Energy Assistance Program Block Grant

Review of Pension Fund Investments in Low- and Moderate-Income Housing Projects

Review of the Nature and Extent of Supplemental Security Income Outreach of SSA Field Offices

Review of the Railroad Retirement Board Activities

Secretarial-Level Oversight of VA Programs and Administrative Activities

Social Security's Actions to Recover Checks Sent to a Deceased Beneficiary

SSA Capping Report on ADP and Telecommunications

Study of Tenant Income Reporting and Verification in HUD Assisted Housing

Survey of Feasibility of Enhancing SSA's Enumeration Verification System to Detect Dual Welfare Benefit Claims

Survey of Fiduciary Breaches in Pension Plans Terminated for Bankruptcy by Plan Sponsors

Survey of SSA Death Notice Procedures

Survey of SSA's Acquisition and Processing of Death Information

Survey of the Accuracy of the Answers Provided Via SSA's 800 Telephone Service

Survey of the Effectiveness of the Federal Government's Effort to Automate State Welfare Programs

Survey of Unreimbursed Expenses Reported by VA Pension Beneficiaries

Survey of VA Insurance Program Management

Testimony on Equity of Medicaid Formula Distribution

Trends in Joint and Survivor Selection Rates Before and After Passage of the 1984 Retirement Equity Act

VETERANS

Assessment of VA's Health Care Services for Women Veterans

Assessment of VA's Prescription Drug Refill Policies, Procedures, and Practices

Evaluation of VA's Administration of the Medical Care Means Test

Evaluation of VA Expenditures for Private Health Care

Monitoring of VA Mortality Study Follow-up

Review of the Diagnosis and Treatment for Alcoholism at VA Medical Centers

VA's Drug Security Policies, Procedures, and Practices

VA Efforts to Assure that Psychiatric Patients Receive Quality Care

VA Quality Assurance and Joint Commission Standards: Noncompliance at VA and Non-VA Hospitals

VA's Use of Part-time Physicians in Its Health Care System

APPENDIX V

APPENDIX V

OTHER ACTIVITIES BY GAO OFFICIALS

During fiscal year 1990, GAO officials spoke, presented papers, conducted seminars, and participated on panels 42 times on issues relating to aging: once on food assistance issues, 26 times on health issues, 6 times on housing issues, 4 times on income security issues, and 5 times on social services issues.

FOOD ASSISTANCE

Jerry Killian and Ken McDowell, Resources, Community, and Economic Development Division, discussed GAO's reviews of food assistance program requirements, before the National Frozen Food Association's Government Relations Committee, Washington, February 14, 1990.

HEALTH

Eric Anderson, Human Resources Division

-- discussed GAO's role in the policymaking process and its work on aging and health issues, before the University of Southern California's graduate policy seminar for students in gerontology and public policy, Washington, October 5, 1989.

-- spoke on "Nursing Homes: Equity of Access for Medicaid Recipients," before the Gerontological Society of America's scientific meeting, Minneapolis, November 18, 1989.

Jerry Baugher and Pete Oswald, Human Resources Division, discussed GAO's review of cataract surgery, before the Health Care Financing Administration's Cataract Demonstration Work Group, Baltimore, May 24 and June 7, 1990.

James Cantwell, Human Resources Division, chaired a session and presented a paper, "Changing Medicare Part B Deductible," at the Western Economic Association meetings, San Diego, California, June 30, 1990.

Mary Ann Curran, Human Resources Division, discussed GAO's reviews of actions by HCFA and the Joint Commission on the Accreditation of Healthcare Organizations to assure quality care in hospitals, at the annual meeting of the Association of Health Facility Licensing and Certification Directors, Orlando, Florida, October 13, 1989.

Robert Dee, Boston Regional Office, discussed GAO's report, Medicare: Impact of State Mandatory Assignment Programs on Beneficiaries (GAO/HRD-89-128, Sept. 19, 1989), at the annual meeting of the American Public Health Association, Chicago, October 22-26, 1989.

Nancy Donovan, New York Regional Office, presented a paper cowritten with Ed Stropko, Human Resources Division, on eligibility criteria and cost-sharing for long-term care, at the annual meeting of the Gerontological Society of America, Minneapolis, November 18, 1989.

Nancy Donovan, Janet Shikles, and Edwin Stropko, Human Resources Division

-- submitted a paper, "Use of ADLs as Eligibility Criteria for Long-Term Care," at the Third International Conference on Systems Science on Health-Social Services for the Elderly and Disabled, Bologna, Italy, April 20, 1990

-- ran a booth advertising GAO's health care work at the annual meeting of the American Society on Aging, San Francisco, April 5-8, 1990.

Michael Gutowski, Human Resources Division, discussed "Cost-Sharing for In-Home Services: Towards a More Equitable Distribution of Service Costs," at the annual meeting of the American Public Health Association, Chicago, October 22-26, 1989.

Roger Hultgren, Human Resources Division, discussed GAO's report on physician incentive payments by HMOs, at a symposium on health care cost containment sponsored by Seton Hall University Law School, Elizabeth, New Jersey, October 13, 1989.

Marsha Lillie-Blanton, Human Resources Division, spoke on "Health Care for the Nation's Poor: System or Non-System," before the American College of Preventive Medicine, Atlanta, April 21, 1990.

Jim Linz, Human Resources Division, spoke on changes in Medicaid mental health benefits, before the National Association of Counties' legislative conference, Washington, March 19, 1990.

Wayne Marsh, Sacramento, and Ben Ross, Human Resources Division, discussed GAO's reviews of state comprehensive mental health plans, before the winter 1989 meeting of State Mental Health Directors, Rosslyn, Virginia, December 11-12, 1989.

Tom Monahan and Jim Hampton, San Francisco, discussed the "GAO Culture" and presented a case study of GAO's review of the Medicare schedule for clinical laboratory service reimbursement, before the Presidential Management Internship Program Western Career Development Group, San Francisco, July 10, 1990.

Frank Pasquier, Seattle Regional Office, discussed GAO's reviews of Medicare's secondary payer program, before the National Medicare Secondary Payer Conference, Hilton Head, South Carolina, November 28, 1989.

Kalman Rupp, Human Resources Division, presented a paper on "Medicare HMO Ratesetting: The Issue of Systematic Risk," at the annual meeting of the American Economics Association, Atlanta, December 28-30, 1989.

Sushil Sharma, Program Evaluation and Methodology Division

-- chaired a symposium on "Federal Government, Elderly, and Medication--Signals for Prescribers, Dispensers, and Patients," at the annual meeting of the American Public Health Association, Chicago, October 22-25, 1989.

-- presented a paper on, "Evaluation of Drug Utilization Programs--A Methodological Challenge," at the School of Pharmacy, University of Washington at Seattle, July, 1990.

Sushil Sharma and James Solomon, Program Evaluation and Methodology Division

-- co-authored an article, "Third Party Reimbursements for Counseling Needed," published in Hospital Economics, vol. 2, September, 1990.

-- presented a paper on, "Reimbursement of Cognitive Services in Third Party Programs," at the annual meeting of the American Pharmaceutical Association, Washington, D. C., 1990.

Janet Shikles, Human Resources Division, spoke on "Major Health Issues and the 101st Congress," before Yale's Graduate School of Public Health, New Haven, Connecticut, February 8, 1990.

Sheila Smythe, Human Resources Division

-- spoke on "Tough Choices--Controlling Health Care Costs," at a conference sponsored by the Investment Management Institute, New York, January 23, 1990.

-- was a presenter in a session on "Health Care Policy: The Private Sector's Role," at the American Society for Public Administration's national conference, "Public Service Partnerships: Innovations for the 21st Century," Los Angeles, April 7-11, 1990.

James Solomon, Program Evaluation and Methodology Division, presented a paper on "Possible Repeal or Scaling Back of the Medicare Catastrophic Coverage Act of 1988: Lessons Learned," at the annual meeting of the American Public Health Association, Chicago, October 22-25, 1989.

Michael Stepek, Philadelphia Regional Office, and Roger Hultgren, Human Resources Division, discussed GAO's analysis of loss ratio data for Medicare supplemental insurance, at a Medigap roundtable discussion cosponsored by the American Bar Association and Families USA, Washington, March 22, 1990.

HOUSING

Bob Barbieri, New York Regional Office, spoke on GAO's role in the future of homelessness, in a plenary session on "Homelessness in the 1990's," at the fourth annual conference of the Colorado Coalition for the Homeless, Denver, October 25-26, 1989.

John Ols, Resources, Community, and Economic Development Division, discussed GAO's reviews of housing and homelessness, and moderated a panel discussion on housing issues, at the annual meeting of the Urban Affairs Association, Charlotte, North Carolina, April 19-20, 1990.

Tom Repasch, New York Regional Office, and Gene Aloise and Marnie Shaul, Resources, Community, and Economic Development Division, discussed GAO's report, Homelessness: Too Early to Tell What Kinds of Prevention Assistance Works Best (GAO/RCED-90-89, Apr. 24, 1990), before the Interagency Council on Homelessness, Washington, May 29, 1990.

Tom Repasch, New York Regional Office, participated in a panel discussion on "Prevention of Homelessness: Examination of Effective Models," at the fourth annual conference of the Colorado Coalition for the Homeless, Denver, October 25-26, 1989.

Tom Repasch and Bryon Gordon, New York Regional Office, discussed the region's work on homelessness, before policy analysis classes at Syracuse University, November 1, 1989.

Tom Repasch and Wendy Pakal, New York Regional Office, participated in a panel discussion on "Prevention: Developing a Homeless Prevention Fund in Colorado," at the fourth annual conference of the Colorado Coalition for the Homeless, Denver, October 25-26, 1989.

INCOME SECURITY

Ken Bombara, Human Resources Division, spoke on "The Accumulation of Social Security Trust Fund Reserves: Implications for Policy," at the annual meeting of the American Society on Aging, San Francisco, April 5-8, 1990.

Glenn Davis, Human Resources Division, discussed the use of age discrimination waivers in company exit incentive programs, at the annual meeting of the American Society on Aging, San Francisco, April 5-8, 1990.

Donald Snyder, Human Resources Division, discussed Medicare catastrophic insurance and retiree health plans, at the annual meeting of the American Society on Aging, San Francisco, April 5-8, 1990.

Sharon Ward, Human Resources Division, discussed pension rules and benefit inequities in small pension plans, at the annual meeting of the American Society on Aging, San Francisco, April 5-8, 1990.

SOCIAL SERVICES

David Bixler, Human Resources Division, discussed "GAO and Its Approach for Studying the Family Support Act of 1988," before the American Public Welfare Association's National Council of State Human Services Administrators, Washington, February 28, 1990.

Michael Gutowski, Human Resources Division, discussed GAO's report, In-Home Services for the Elderly: Cost Sharing Expands Range of Services Provided and Population Served (GAO/HRD-90-19, Oct. 23, 1989), at the Roundtable on Cost Sharing, sponsored by the Administration on Aging, Washington, December 14, 1989.

Marsha Lillie-Blanton, Human Resources Division, spoke on "The At-Risk Population in the District of Columbia," at a symposium sponsored by the D.C. State Planning and Development Agency, Washington, April 30, 1990.

James Solomon and Sushil Sharma, Program Evaluation and Methodology Division, coordinated a seminar on information and assistance programs and information flow within aging networks for the Senate Select Committee on Aging, Washington, April 19, 1990.

James Solomon, Program Evaluation and Methodology Division, moderated a seminar on "Older Americans Act--Critical Issues," for the Senate Select Committee on Aging, Washington, January 30, 1990.

APPENDIX VI

APPENDIX VI

GAO ACTIVITIES REGARDING OLDER WORKERS

GAO appointed 706 persons to permanent and temporary positions during fiscal year 1990, of whom 137 (19 percent) were age 40 and older. Of GAO's total work force of 5,235 on September 30, 1990, 2,869 (54.8 percent) were age 40 and older.

GAO employment policies prohibit discrimination based on age. GAO's Civil Rights Office continues to (1) provide information and advice and (2) process complaints involving allegation of age discrimination.

GAO continues to provide individual retirement counseling and preretirement seminars for employees nearing retirement. The counseling and seminars are intended to assist employees in

- calculating retirement income available through the Civil Service and Social Security systems and understanding options involving age, grade, and years of service;
- understanding health insurance and survivor benefit plans;
- acquiring information helpful in planning a realistic budget based on income, tax obligations, and benefits, and making decisions concerning legal matters;
- gaining insights and perspectives concerning adjustments to retirement;
- increasing awareness of community resources that deal with preretirement planning, second career opportunities, and financial planning; and
- increasing awareness of lifestyle options available during the transition from work to retirement.

APPENDIX VII

APPENDIX VII

MAJOR CONTRIBUTORS TO THIS REPORTHUMAN RESOURCES DIVISION, WASHINGTON, D.C.

Carl R. Fenstermaker, Assistant Director, (202) 275-6169
 Richard H. Horte, Advisor
 Anne S. Freeman, Evaluator-in-Charge

ITEM 22. LEGAL SERVICES CORPORATION

OCTOBER 30, 1990.

DEAR MR. CHAIRMAN: Thank you for the opportunity to provide the Special Committee on Aging with information regarding the Legal Services Corporation's activities related to meeting the legal needs of older Americans.

I hope that the enclosed material is useful to those who will be using your Committee's publication.

Sincerely,

DAVID H. MARTIN,
President.

LEGAL SERVICES CORPORATION ADDRESSING OLDER AMERICANS' LEGAL NEEDS

The Legal Services Corporation (LSC) was created by Congress in 1974, to provide legal assistance to indigent persons in civil matters. LSC annually awards grants to 323 legal services programs in each of the 50 States, the District of Columbia, the Virgin Islands, Puerto Rico, Micronesia, and Guam. These programs employ advocates (attorneys and paralegals) to provide legal assistance to the poor. Each legal services program follows certain guidelines as to the types of cases it accepts and the financial eligibility of possible clients.

For fiscal year 1990, Congress appropriated \$321 million to LSC. The offices of the regularly funded LSC grantees are staffed by over 6,000 qualified advocates. During calendar year 1989, these legal services advocates closed approximately 1.4 million cases; approximately 12 percent of these cases involved service provision to clients over age 60.

While LSC provides the greatest percentage of funding for most of these legal services programs, other public and private funding sources provide significant resources. These additional income sources provided over \$149 million to LSC grantees during 1989. Of this amount, over \$12 million was provided by the Federal Government through the Older Americans Act for services to senior citizens. Funding from other public and private sources continue to increase each year, with Interest on Lawyers' Trust Accounts (IOLTA) funding leading the way in growth, providing over \$35 million to these legal services programs.

Two of LSC's regular grantees, the National Senior Citizens Law Center and Legal Counsel for the Elderly, focus on legal assistance for older Americans. In addition, some of the law school clinics awarded one-time grants through the annual Law School Civil Clinical Program grant competition concentrate on legal services to older Americans.

NATIONAL SENIOR CITIZENS LAW CENTER

(Main Office)

1052 West 6th Street, Suite 700, Los Angeles, CA 90017 (213) 482-3550.

(Branch Office)

2025 M Street, NW., Suite 400, Washington, D.C. 20036 (202) 887-5280.

The National Senior Citizens Law Center (NSCLC), a national support center, was awarded a \$604,616 LSC grant in fiscal year 1990. Under the terms of its grant, the NSCLC provides a variety of services to its national service area, including legislative and administrative representation to the elderly poor. The Center also provides training for attorneys and paralegals, on such topics as age discrimination, Medicaid, Medicare, long-term disability, the Older American Act, pensions, Social Security/SSI, and disability. In addition to producing and distributing the *Washington Weekly* and the *Nursing Home Law Letter*, the Center processed approximately 3,000 requests for assistance regarding elderly issues in calendar year 1989. The Center's Executive Director, Burton D. Fretz, can be contacted for further information.

LEGAL COUNSEL FOR THE ELDERLY

1909 K Street, N.W., Suite 1005, Washington, D.C. 20005 (202) 737-6469.

Legal Counsel for the Elderly (LCE) was awarded a \$109,740 LSC supplemental field grant in fiscal year 1990. During 1989, LCE processed approximately 1,100 requests for assistance from elderly clients, in such general areas as public benefits protection, protective services, consumer and probate. In addition, LCE, in conjunction with the American Association for Retired Persons (AARP), provides specific

outreach to the homebound and Hispanic communities of Washington, D.C. The Program's Executive Director, Wayne Moore, can be contacted for further information.

LAW SCHOOL CIVIL CLINICAL PROGRAM

LSC also provides funding for law school clinics. Because such grants are made on an academic year basis, services to elderly Americans were provided by these grantees from two separate grant cycles—1989-90 and 1990-91.

For the academic year 1989-90, LSC awarded grants to a total of 19 law school clinics, 5 of which concentrated on the elderly.

STATE UNIVERSITY OF NEW YORK (SUNY) AT BUFFALO LAW SCHOOL. SUNY Law School received \$53,320 to continue its existing health law clinic for the elderly. This clinic is recognized for its expertise in Medicaid and Medicare. It closed 71 cases during the first 6 months of the grant. The instructors of the clinic held 176 meetings with the local bar associations to share information concerning new laws, regulations, policies and procedures that impact on the elderly poor. The clinic also presented six community outreach programs to senior citizen groups and conducted training sessions on Medicare benefits for local attorneys and Social Service case workers.

SOUTHERN ILLINOIS UNIVERSITY AT CARBONDALE SCHOOL OF LAW. Southern Illinois received \$49,448 to expand its legal assistance to the elderly program in Southern Illinois. The clinic concentrated on services to minorities, the homebound, and nursing home residents in such areas as family law, public benefits, and adult guardianship. During the first 6 months, the clinic served over 1,433 elderly persons and closed 487 cases.

THURGOOD MARSHALL SCHOOL OF LAW (TEXAS SOUTHERN UNIVERSITY). Thurgood Marshall School of Law received \$45,110 to expand its elderly law clinic in Houston, TX. Areas of focus included wills, taxation, public benefits, housing, and protective services. During the first 6 months, the clinic served a total of 79 clients and closed 42 cases. Student interns, trained by qualified faculty staff, presented seminars on various topics, such as wills, probate, protective services, public benefits, housing, and consumer law.

UNIVERSITY OF WISCONSIN. The University of Wisconsin received \$70,956 to start a new clinic to address health-related legal issues for nursing home residents. During the first 6 months, the clinic closed a total of 81 cases. Students interns held 17 seminars on issues affecting the elderly. The clinic is a clearinghouse for information on the durable power of attorney in health care.

SIXTY-PLUS LAW CENTER, THOMAS M. COOLEY LAW SCHOOL. The Sixty-Plus Law Center received \$63,438 for its Medicare Recovery Project. The Project assists residents of skilled nursing facilities to appeal denials of Medicare coverage. During the first 6 months, the clinic closed a total of 535 cases.

for the academic year-1990-91, LSC awarded \$1,051,524 to a total of 20 law schools. While each of these schools will assist elderly clients on an as needed basis, two concentrated on elderly issues.

SOUTHERN ILLINOIS UNIVERSITY AT CARBONDALE SCHOOL OF LAW. Southern Illinois University received \$64,093 to provide legal services to low-income persons, over the age of 60, in 13 southern counties of Illinois. The Clinic provides direct legal services to more than 1,800 elderly persons annually at 20 sites through this rural, isolated, and economically depressed area. Such legal assistance is provided in the following issues: drafting wills, durable power of attorney, living wills, elderly abuse, and financial exploitation of the elderly.

UNIVERSITY OF INDIANA-INDIANAPOLIS SCHOOL OF LAW. The University of Indiana received \$68,546 to extend its clinical legal services to represent indigent, ill, and elderly clients who are HIV-infected or who suffer from other long-term illnesses such as AIDS and Alzheimer's disease.

ITEM 23. NATIONAL ENDOWMENT FOR THE ARTS

DEAR MR. CHAIRMAN: I am pleased to report to you on the fiscal year 1990 activities of the National Endowment for the Arts involving older Americans.

Through advocacy, technical assistance, and funding, the Endowment seeks to ensure that older Americans have opportunities to enjoy the best of our Nation's art. We continue to work on all fronts to improve access to cultural programs through the elimination of attitudinal, financial, logistical, and architectural barriers.

This agency's concern and commitment to the full participation of all citizens in the arts is not only reflected in its mission and policies, but also in its advocacy and support of older Americans.

This year's report to the Committee highlights a Universal Design initiative to educate designers, city officials, and planners, schools of design and consumers on this important concept. Universal Design is simply a way of designing spaces and products at little or no extra cost so they are both attractive and functional for all people, regardless of age or abilities. The intent is to remove the expensive "special" label for design for people with physical limitations and eliminate the institutional appearance of many current accessible designs. I was pleased to open an Endowment organized meeting on September 12, 1990, where 13 leaders in this field recommended ways to better serve and educate the field on universal design. Consensus was that the Endowment could assume a leadership position in Universal Design advancement and enhance Americans' access to all the arts by supporting simultaneous strides in classroom education, professional practice and the dissemination of state-of-the-art information. Attached is a paper that summarizes the meeting and recommendations for your review.

The report which follows provides a thorough description of our advocacy, technical assistance, and funding activities in support of increased access to the arts for older Americans. Be assured that the National Endowment for the Arts will continue its work to make the arts a meaningful part of our older citizens' lives.

Thank you for this opportunity to present the Special Committee on Aging with an overview of the Arts Endowment's work in progress for older citizens.

Sincerely,

JOHN FROHNMEYER,
Chairman.

Enclosures.

THE NATIONAL ENDOWMENT FOR THE ARTS SUMMARY OF ACTIVITIES RELATING TO OLDER AMERICANS—FISCAL YEAR 1990

INTRODUCTION

The mission for the National Endowment for the Arts is to "foster the excellence, diversity and vitality of the arts in the United States" and "to help broaden the availability and appreciation of such excellence, diversity and vitality." The Arts Endowment continues to be actively engaged in an effort to make the arts more accessible in the firm belief that art in its broadest spectrum enriches the lives of all Americans, regardless of age.

Older individuals are among the many people participating in Endowment supported activities. But beyond this support, the Arts Endowment makes significant efforts to help eliminate barriers that may impede full participation in arts activities for older adults. Many such programs are initiated through the Endowment's Office for Special Constituencies.

OFFICE FOR SPECIAL CONSTITUENCIES

The Office for Special Constituencies serves as the technical assistance and advocacy arm of the Arts Endowment for people who are older, disabled, or living in institutions such as nursing homes.

This office works with Endowment staff and grantees, State and local arts organizations, as well as other Federal agencies to educate artists and administrators on how to mainstream special constituencies into the arts. Established in 1976 by the National Council on the Arts, the office works in a wide variety of ways through technical assistance, funding and advocacy initiatives. Some examples of activities initiated and developed by this office include:

ACCESS TO THE ARTS: A RIGHT, NOT A PRIVILEGE

The Special Constituencies office worked with the Mid-Atlantic Arts Foundation (a regional organization representing nine states) to convene the *Access to the Arts: A Right, Not a Privilege* conference in Washington, DC on July 9-10, 1990. Over 260 arts administrators attended the meeting to better educate themselves on ways to: (1) make their own activities more available to older and disabled individuals; and (2) educate their constituents on access issues. Most participants represented state arts agencies and other arts service organizations that have leadership roles in the arts community.

As part of my opening remarks, I commended the Mid-Atlantic Arts Foundation for being the first of six regional arts agencies to convene a conference devoted solely to educating their membership on accessibility. The focus of the conference was inclusion—integrating older people and people with disabilities into

the arts mainstream for full and equal participation. Most organizations have a commitment to provide accessibility with dignity and independence toward individuals, but they need the guidance to do it.

Wendy Luers, a member of National Council on the Arts, addressed the assembly and talked about her concerns and involvement in accessibility, both nationally and internationally. She chaired the opening panel of artists and arts administrators who sensitized audience members to the crucial need for increased accessibility. Panelists included Ambrosia Shepard, an older poet who participated in an 1984 Endowment supported effort called the "Arts Mentor Program". The National Council on Aging in Washington, DC, conducted this model project that trained older artists on how to adapt their skills and disciplines to teaching children and older adults. Following the 2-day training, 12 older artists were placed in senior centers or schools where they taught for 8 weeks. Since that time, poet Shepard has continued to teach poetry to older adults, at the Arthur Capper Senior Center in Washington, DC. She told the participants how this unique training made it possible for her to teach poetry for the first time to older individuals; and how these experiences have enhanced her poetry.

Over 40 acknowledged leaders in the arts and accessibility communities made presentations on a broad range of access issues; for example, seminars on new technologies including assistive listening systems for hard-of-hearing people and audio description for those with visual limitations; accessible visual arts and performing arts programs; staff training; and design solutions.

This effort was highly successful and reflected in the conference evaluation and the many efforts that continue to evolve from the conference. They include:

- access training workshops that were conducted for staff and board members of five State and regional arts councils;
- the Maryland, Delaware, New Jersey, District of Columbia, and West Virginia Arts Councils are convening statewide access conferences for their grantees; and
- the National Assembly of State Arts Agencies, that serves State arts agencies throughout the country, has agreed to sponsor a committee (composed of its membership and several older or disabled arts administrators) to develop an access, checklist for arts agencies; and determine other ways arts organizations can respond to the needs of older people and those with various disabilities.

This regional gathering is having a significant impact on the state of accessibility to the arts in the Mid-Atlantic region and beyond. For example, other regional arts groups are interested in holding similar conferences for their constituents.

UNIVERSAL DESIGN INITIATIVE: DESIGNING FOR THE LIFESPAN

During this reporting period, the Special Constituencies Office developed a Universal Design Initiative with the Endowment's Design Arts Program to: help the Endowment better understand the importance of designing for the lifespan; evaluate the state of the art; determine current needs in the field and options for educating both design professionals and lay people about Universal Design techniques; and to determine how the Arts Endowment can better serve and educate the field on this important concept.

America has struggled for years over how to serve populations with special physical needs; children, older citizens, and people with disabilities. Progress has been impeded by misconceptions (both in the public mind and among design professionals) that users represent a small portion of the population, and that designs for them are institutional-looking, inefficient to produce, and costly to maintain.

Yet Americans are becoming aware that at a point in everyone's life, the environment becomes as disabling factor unless equipped with universal designs. This truism is increasingly apparent to members of the "baby boom" generation as they cope with parental limitations and glimpse the potential frustrations of their own later years. Thus, the need for universal design exceeds the 37 million Americans who have a functional limitation.

Universal design goes beyond "special" features and elements to make a space or product accessible. Rather, it is design that accommodates people of all ages, sizes, and abilities—a design process that incorporates features, elements, and products that may, to the greatest extent possible, be used by everyone.

Initially, the Special Constituencies Office convened a meeting on January 22, 1990, where four leading practitioners and advocates of Universal Design met with key staff members to examine the possibility of establishing an Endowment sponsored leadership initiative. Participants at this preliminary meeting

briefly reviewed demographic trends, legislative changes (particularly the Fair Housing Amendments Act of 1988 and the Americans with Disabilities Act of 1990), and the state of design education and practice in this country. They urged the Endowment to convene a larger, more representative group to identify opportunities for educating both design professionals and laypeople about the need for and means of taking a "universal" approach to the design of buildings, public spaces and products.

Subsequently, the Design Arts Program and Special Constituencies office organized a Sept. 12-13, 1990, meeting with 13 individuals who were selected from a large pool of experts.

At the opening session, participants were asked to share their principal concerns and state what they hoped to see come out of the meeting. The following morning was devoted to a general discussion of needs in the field. Based on the deliberations of the January meeting and additional discussion that morning, participants divided into working groups to develop recommendations in three areas: Design Curricula in all disciplines, Professional Practice, and the potential for a Publication and/or Clearinghouse on Universal Design. The meeting concluded with general discussion by all participants.

Recommendations included creating a special Leadership Initiative on Universal Design to support a national conference with representation from all design disciplines, development of a communications strategy on Universal Design, and the creation of a Universal Design publication for designers and laymen. The ideas shared by the participants will provide invaluable guidance to the Arts Endowment as it explores ways of encouraging and supporting initiatives to promote the widespread understanding and practice of Universal Design.

MUSEUM ACCESS PUBLICATION

Our interagency project with the Institute of Museum Services to produce a museum access guide continues to advance. Its purpose is to help museum professionals across the country improve access to their programs and activities for older and disabled visitors. The book will include photographs depicting the setting, participants, and objects featured in each of 20 exemplary programs, services, or designs. It will include information (such as costs and the amounts of staff time required) sufficient for replication. A selected bibliography of resource materials also will be featured.

The Special Constituencies office developed a cooperative agreement with the American Association of Museums (AAM) to produce this first-time book. On November 29, 1990, AAM convened a panel of 9 museum and accessibility professionals who reviewed 61 applications from a wide variety of museums. Subsequently, the panel recommended 20 museum programs to feature in the forthcoming publication. Careful consideration was given to selecting museums that represent a good balance in terms of their geographic location, type of museum, size of the institution, and the targeted audience (e.g., older adults, visually impaired people, mobility impaired persons, and so on).

The AAM has begun work on the publication with a December 1991 production goal. This service organization can assure broad distribution as the major national service organization for museums with excellent marketing capability. With the recent passage of the Americans with Disabilities Act and existing 504 Regulations, a pressing need exists for this kind of well-organized information the book will contain.

ARTS ENDOWMENT FUNDING

Although Endowment-supported programs serve and benefit people of all ages, many other Endowment grants provide support for activities that are either directed to or include older individuals. The examples below represent a range of programmatic activities—from those designed for outreach to older audiences to grants which reach significant artists who happen to be older.

PROGRAM SUMMARY OF NATIONAL ENDOWMENT FOR THE ARTS

CHALLENGE III

River City Brass Band, in Pittsburgh, PA, will expand its series to the Mon Valley region. The region's population of 260,000 contains a disproportionate number of unemployed citizens, low-income and poverty-level older citizens. During the first season of the RCBB's Homestead series, concerts will be provided to residents free-of-charge. They will provide a broad range of prices of each site, with inexpensive,

discounted tickets for older persons and students. In addition, blocks of free tickets will be set aside at each performance for economically deprived people.

Metropolitan Arts Council, in Omaha, NE, proposes a three-part program to increase access to the arts for all citizens, and expand the existing partnerships between Metro Arts and local government. Their mission statement reflects their outreach goals: "At Metro Arts we believe the arts are for all of us; for children and adults, for people of all races and ethnic backgrounds, for people with disabilities, and for people in hospitals and nursing homes. Our job is to make sure that everyone in the Omaha area has access to the arts, no matter where they live, where they work or who they are."

WGBH Educational Foundation, in Boston, MA, has undertaken a leadership initiative to provide Descriptive Video Services (DVS) for visually impaired audiences for its American Playhouse and Mystery programs; and to help other television networks adopt this unique system. DVS offers narrated explanations of a television program's key visual elements—such as character movements and body language, settings and scene changes—inserted into pauses in the programs dialogue.

DANCE

Dance Umbrella, Boston, Inc., in Cambridge, MA, the largest presenter of contemporary dance in New England, will present Dancers of the Third Age, a group of older dancers that are directed by choreographer Liz Lerman.

Colorado Dance Festival, in Denver CO, will present nationally and internationally acclaimed artists during its month-long summer season. For the festival, CDF will explore the theme of "The Wise Ones"—senior and younger artists who are involved in, to paraphrase John Cage, permanent commitment to wonder. Among those artists being considered as performers or faculty are Lucas Hoving, Remy Charlip, Kazuo Ono, Liz Lerman (Dancers of the Third Age), Bessie Schonberg, Steve Paxton/Lisa Nelson, and others.

New Hampshire State Council on the Arts, in Concord, NH, will sponsor Liz Lerman/Exchange and Dancers of the Third Age for 1 week in January/February, 1992 to participate in community outreach programs, workshops, an internship program for local dancers, and master classes. Ms. Lerman and company members will lead master classes with students and dancers and participate in targeted workshop sessions for dancers, and presenters the sessions will focus on developing community dance programs and "first, second, and third age" audiences for dance. In addition, they will conduct workshops and classes in senior centers, healthcare facilities, and schools.

Choreographers' Fellowships were awarded to eight older dancers to assist their individual artistic growth:

Beverly Blossom, Modern choreographer, of Urbana, IL

Eddie Brown, Tap choreographer, of Los Angeles, CA

James "Buster" Brown, Tap choreographer, of Brooklyn, NY

Charles "Cookie" Cook, Tap choreographer, of Brooklyn, NY

Charles "Chuck" Green, Tap choreographer, of New York, NY

Pearl E. Primus, Modern/African choreographer, of New Rochelle, NY

La Vaughn E. Robinson, Tap choreographer, of Philadelphia, PA

Indrani Rahman, Classical Indian choreographer, of New York, NY

DESIGN ARTS

Edward P. Stevens, in Menomonie, WI, is designing an exercise device for older adults living independently. The objective is to design and construct for testing an exercise device for older persons that can be used in a residential environment on a year-round basis, and will encourage the process of maintaining and improving fitness of older adults.

EXPANSION ARTS

Senior Arts, Inc., in Albuquerque, NM, will hold its seventh annual workshop series which utilizes professional senior artists to provide traditional and contemporary arts workshops and programs in music, visual arts, dance, theater, and folk arts. Programs and artists representing different ethnicities will be featured.

Opus, Inc., in Hartford, CT, provides performances and residencies in nontraditional settings by professional older Connecticut artists. A spring festival is planned to present the painting, photography, weaving, music, drama, and dance produced during the residencies. Opus, Inc. promotes human dignity through cultural enrichment and provides experience of the arts for elderly men and women in the Greater Hartford area.

FOLK ARTS

Appalshop, Inc., in Whitesburg, KY, provides Roadside Theatre which collaborates with two area agencies on aging to identify and involve local senior artists in storytelling and music presentations at two community festivals.

La Compania de Teatro de Albuquerque for Los Reyes de Albuquerque, in Albuquerque, NM, presents programs of traditional Hispanic music in local centers for older adults.

Dance Exchange, Inc./Dancers of the Third Age, in Washington, DC, a professional quality company of 21 older adults, provides performances, classes, and workshops in dance throughout the Washington area.

Charter Family Memorial Music Centers, Inc., in Hiltons, VA, preserves and promotes blue grass, traditional old-time string bands, and other musical styles from the Appalachian region. Many participants are older "back porch" musicians who rarely perform publicly.

National Heritage Fellowships were awarded to folk artists whose work exhibits authenticity, excellence, and significance within a particular tradition. Older recipients include:

Maude Kegg, an Ojibwe Storyteller/Craftswoman/Tradition Bearer, of Onamie, MN

Howard Armstrong, an Afro-American String Band Musician, of Detroit, MI

Robert Spicer, a flatfoot dancer, of Dickson, TN

Art Moilanen, a Finnish Accordionist, of Mass City, MI

INTER-ARTS

University of Illinois/Krannert Center for the Performing Arts, at the University of Illinois in Urbana/Champaign, continues its special audience development initiative for older adults, physically disabled persons and ethnic minorities. Phase five of the audience development initiative involves; an intergenerational project between local schools and the Retired Senior Volunteer Program; a program involving college students and Senior citizens; and elder hostel activities coordinated with the University of Illinois summer program.

LITERATURE

Taproot Workshops, Inc., in Stony Brook, NY, supports writers' fees for three authors to give presentations to this community of older writers on topics such as memoir writing, narrative voice, and editing. Aaron Kramer, Cornelius Eady, and Jill Bart will offer presentations at public libraries, and the Poetry Center on campus, to develop the older audience for creative written expression.

Rome Art and Community Center, in Rome, NY, supports writers' fees for a writer in residence for 3 months and a reading series presenting three other authors. Local poet Michael Burkard will give readings and lead discussions at the center and at a variety of community sites such as a library, a prison, and a senior citizen center.

Elders Share the Arts, in Brooklyn, NY, supports writers' fees for a project to feature three writers whose work honors the cultural, social, and historical contributions of minority people. Each of the writers—Carmen Valle, Mark Kaminsky, and Fae Ng—will conduct a reading and discussion at two senior centers, and lead writing workshops in which the participants will formulate narratives.

Graywolf Press, in St. Paul, MN, supports production and promotion costs for five books: a collection of essays by Jose Lima; a short story collection (an anthology of short stories offering international perspectives on aging); two fiction works; and a poetry collection by Dana Gioia. Founded in 1974, Graywolf has now published over 80 titles.

Creative Writing Fellowships were awarded to six older writers for the development of new works:

John Dickson, poet, of Evanston, IL

Cynthia MacDonald, poet, of Houston, TX

David Markson, fiction writer, of New York, NY

Lisel Mueller, poet, of Lakeforest, IL

Joan Swift, poet, of Edmonds, WA

William Wiser, fiction writer, of Denver, CO

Senior Fellowships were awarded to two older individuals for lifetimes of achievement as creative writers:

Denise Leverton, poet, of Seattle, WA

Wallace Stesner, prose writer, of Los Altos Hills, CA

A *Translation Fellowship* was awarded to an older translator, *David Rubin*, of New York, NY

MEDIA ARTS

International Museum of Photography at George Eastman House, in Rochester, NY, provides an outreach program that consists of Senior Citizens Matinees, a program of Hollywood classics that several hundred older persons attend each week.

Guadalupe Cultural Arts Center, in San Antonio, TX, provides a Senior Summer Cinema "Time to Remember/Tiempo DeRecordar," series. Over 20 percent of their total audience is comprised of older adults.

MUSEUMS

Institute of American Indian Arts, Santa Fe, NM, will present an exhibition that will be introduced and hosted by an Elder native American.

Henry Street Settlement, in New York, provides valuable and otherwise unavailable audiences of school-age children, senior citizens and families from their multicultural, low-income Lower East Side neighborhood. In addition, they are initiating a gallery series for older adults.

MUSIC

All Seasons Chamber Players, in Demarest, NJ, provides concerts in New Jersey and Metropolitan New York libraries that are marketed to the general public, as well as to senior, low-income, disabled, and urban citizens.

Baton Rouge Symphony Association, in Baton Rouge, LA, conducts outreach programs, including the "Round About Town Concerts", for special constituencies that includes older adults.

Bronx Arts Ensemble, Inc., in Bronx, NY, provides music programs and workshops for older adults.

Cedar Rapids Symphony Orchestra Association, in Cedar Rapids, IA, conducts educational programs for older adults.

Chamber Symphony of San Francisco, in San Francisco, CA, conducts concerts that target older audiences.

Dallas Symphony Association, Inc., in Dallas, TX, provides free outdoor concerts, as well as special concerts for older, disabled, and minority audiences.

Flint Institute of Music, in Flint, MI, provides Sunday matinees for families and older adults.

Fort Wayne Philharmonic Orchestra, Inc., in Fort Wayne, IN, sends its four ensembles into senior centers and parks.

Maryland Symphony Orchestra, Inc., in Hagerstown, MD, provides performances in schools, hospitals, and senior citizen centers.

Peoria Symphony Orchestra, in Peoria, IL, supports small ensemble performances for students, and older adults.

Puerto Rico Symphony Orchestra Corporation, in Santurce, PR, offers discounted tickets to students, disabled persons, and older adults.

Rosewood Chamber Ensemble, Inc., in Sunnyside, NY, performs in senior centers and parks.

Santa Barbara Symphony Orchestra Association, in Santa Barbara, CA, provides a discounted Sunday Matinee Series for older and disabled persons.

Stamford Symphony Orchestra, Inc., in Stamford, CT, provides discounted and free tickets to older and disabled persons.

Shreveport Symphony Society, in Shreveport, LA, presents concerts in nursing homes and retirement communities.

Jazz Fellowships were awarded to "American Jazz Masters," including four older persons:

Daniel "Danny" Barker, Guitarist/Banjoist, Singer, Composer, Jazz Historian, of New Orleans, LA

Wilber "Buck" Clayton, Trumpeter and Arranger, of Jamaica, NY

Andy Kirk, Saxophonist and Band Leader, of New York, NY

Clark Terry, Trumpeter and Flugel Horn Player, of Bayside, NY

OPERA-MUSICAL THEATER

Opera America, Inc., in Washington, DC, continues its Special Constituencies Technical Assistance Program, which helps member companies make opera available to older and disabled individuals. The program includes mini-grants for accessible programming such as sign interpreted performances. Reports about each mini-grant are published in *504 Programs That Work*, a notebook which disseminates model programs, and encourages opera companies to develop similar efforts.

VISUAL ARTS

Washington State University, in Pullman, WA, presents a visiting artists series entitled "Persistence of Vision: Artists Over 60". The series, co-sponsored by three colleges and a museum in the region, will examine the relationship of artists to their work over an extended period of time. The four participating artists, all born before 1930, will visit Spokane, WA, Pullman, WA, and Moscow, ID, during their 3- to 5-day residencies to present public slide lectures and conduct small group seminars for students.

Visual Artists Fellowships were awarded to support the creative development of professional artists by enabling them to purchase materials and pursue their work. Older artists receiving fellowships include:

Tom Doyle, of New York, NY, for sculpture
Tage Frid, of North Kingstown, RI, for crafts
John Marcoux, of Providence, RI, for crafts
Rudolf Staffel, of Philadelphia, PA, for crafts

NATIONAL ENDOWMENT FOR THE ARTS

WASHINGTON
D.C. 20506



A Federal agency advised by the
National Council on the Arts

REPORT OF THE SEPTEMBER 12-13, 1990, MEETING ON UNIVERSAL DESIGN LEADERSHIP INITIATIVES

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Introduction

On September 12 and 13, 1990, a group of distinguished individuals in the fields of architecture, landscape architecture, industrial design and disability rights met at the National Endowment for the Arts to discuss opportunities for creating an environment that serves people of all ages and abilities in the United States. The meeting was sponsored by the Endowment's Office for Special Constituencies and Design Arts Program. It was developed in response to a suggestion made by representatives of some of these disciplines in a discussion held with Endowment staff on January 22, 1990. Participants at this preliminary meeting briefly reviewed demographic trends, legislative changes (particularly the Fair Housing Amendments Act of 1988 and the Americans with Disabilities Act of 1990), and the state of design education and practice in this country. They urged the Endowment to convene a larger, more representative group to identify opportunities for educating both design professionals and laypeople about the need for and means of taking a "universal" approach to the design of buildings, public spaces and products.

The Office of Policy Planning and Research, within which Special Constituencies is housed, provided funds to convene a panel of thirteen individuals. Following NEA guidelines established to foster the diversity of all panels and meetings convened at the Endowment, the Office for Special Constituencies and Design Arts Programs invited the following individuals:

Architecture:

Dennis Jones, AIA, Associate Professor of Architecture and Computer Applications,
Virginia Polytechnic Institute and State University, Blacksburg, VA

Ray Kingston, AIA, Principal, FFKR Architects/Planners II, Salt Lake City, Utah, and
member, National Council on the Arts

Raymond Lifchez, Professor of Architecture, College of Environmental Design, University
of California, Berkeley, CA

Ruth Hall Lusher, AIA, Acting Director, Office of Technical and Information Services,
Architecture and Transportation Barriers Compliance Board, Washington, DC

Ron Mace, FAIA, President, Barrier Free Environments, Inc., Raleigh, NC

John Salmen, AIA, Director of Technology and Information, American Hotel & Motel Association, Washington, DC

Burke Wyatt, AIA, Principal, Wyatt/Rhodes Architects, Phoenix, AZ

Landscape Architecture

Richard Austin, ASLA, APA, Associate Professor of Community Development and Horticulture, University of Nebraska, Lincoln, NE

Susan Goltsman, ASLA, Principal, Moore Iacofano Goltsman, Berkeley, CA

Industrial Design:

Patricia Moore, IDSA, Principal, Moore & Associates, Montvale, NJ

James Mueller, President, J. L. Mueller, Inc., Alexandria, VA

Education/Advocacy

Cyndi Jones, editor and publisher, Mainstream: Magazine of the Able Disabled, San Diego, CA

Elaine Ostroff, Executive Director, Adaptive Environments Center, Boston, MA

Under federal regulations, the Endowment is permitted to convene meetings such as this one on Universal Design in order to obtain information or suggestions from individuals on a "non-consensual" basis. Although there was general agreement about many of the perspectives, insights and recommendations recorded in this report, no attempt was made to reach a consensus on the issues discussed or to prioritize the recommendations made. The ideas shared by the participants, nevertheless, will provide invaluable guidance to the Arts Endowment as it explores ways of encouraging and supporting initiatives to promote the widespread understanding and practice of Universal Design.

This report is not a transcription of the proceedings. Rather it is a condensation of the numerous issues, insights and suggestions raised during the day and a half meeting. At the opening session on September 12, participants were asked to share their principal concerns and state what they hoped to see come out of the meeting. The following morning was devoted to a general discussion of needs in the field. Based on the deliberations of the January meeting and additional discussion that morning, participants divided into working groups to develop recommendations in three areas: Design Curricula in all the disciplines, Professional Practice, and the potential for a Publication and/or Clearinghouse on Universal Design. The meeting concluded with reports from each working group and general discussion by all participants.

For purposes of this report, participant comments have been grouped by topic, while the working group recommendations are described separately. Comments representing one person's point of view are followed by that individual's name. Statements without such identification summarize comments by several participants.

Issues and Perspectives

Evolution of Universal Design

The 1990's is going to witness the "second wave" of the accessible environment movement that made its first gains in the 1970s. Among the advances of that decade were the development of

improved technologies and design solutions for access, the passage of more uniform building codes and standards and the integration of a disabilities perspective into some architecture schools. During this period several institutions became focal points for new training and assistance programs and for the development and dissemination of technical materials. These included Barrier Free Environments, Inc., in Raleigh, the Adaptive Environments Center in Boston and especially the National Center for a Barrier Free Environment in Washington, D.C. All of these individual and institutional efforts contributed to an expansion of people's awareness about Universal Design. In the 1980's, however, federal cutbacks under the Reagan administration, the closing of the National Center in 1985, and a certain combat weariness among leading individuals combined to put a damper on the movement's progress. Now with the Fair Housing Amendments Act of 1988 and the Americans with Disabilities Act of 1990, there is renewed emphasis on Universal Design, at least at the federal level.

We did lose ground in the 80's. For example, the gerontological society had a working group on architecture in the 1970's, but it has been discontinued. (Moore)

We need to resurrect and keep the fire that motivated so much activity in the 70's -- arouse people's ire at the handicapping nature of the environment that humans have created. (Mueller)

There is a great need for remedial education among design professionals who were inadequately exposed to Universal Design in school. (Moore)

There is also a need to expand Universal Design education to decision-makers. We need to find ways to get non-designers to welcome designers as members of their problem-solving teams. (Example of a 1977 project assisting mental health officials who had no clue how debilitating their poorly designed buildings were for the patients and what relatively modest design improvements could accomplish.) In the 1990's there may be a new role for designers to serve as facilitators on such problem-solving teams. (Ostroff)

Attitudes

You can't think people into a new way of acting; you've got to act them into a new way of thinking. If we only deal with these issues intellectually, we'll lose the war. We've got to recognize that many designers and their clients feel fear and awkwardness around the subject of disabilities. Promote the idea that universal design is a thing of beauty; no one wants to design an ugly building or space. (C. Jones)

Language is important in shaping people's attitudes: say someone uses a wheelchair rather than is confined to a wheelchair. (C. Jones)

A lot of fear comes from the lack of a touching, feeling experience with people who have some kind of impairment. We should encourage more shared experiences, perhaps send trained individuals with disabilities into every design school for a week or more.

Some designers are antagonistic to access issues because they are aware of the "garbage" that can often be created when people merely follow minimum standards and want to dissociate themselves from such low-quality work. (Lusher)

Most designers who have developed a more "universal" approach have done so because of a personal connection to disabilities, via a friend or relative, not because their training provided the philosophical underpinnings for such an approach. (Mace)

Demographics/Consumers

There is a great need to educate consumers so they ask the right questions about products.

Attitudes are the major impediment. Therefore we need to reach out beyond the design community to influence the way that the public thinks about different types of ability, to influence consumer attitudes and expectations about products and marketers' attitudes towards selling products more broadly across the artificial lines of previously defined and segregated market segments. (Mace)

All programs within the Endowment need to be involved in this, not just Design Arts. We need to get the painters, writers, actors and others to portray the world from a Universal Design perspective and to promote the message of an open, inclusive society. (Ostroff)

We should be aware of the tremendous influence that the mainstreaming legislation of the 1970's is having and will continue to have: a whole generation is coming along that expects to get out and about in the environment rather than be segregated or relegated to second class status. They constitute a strong force for change and public education. We should also be encouraging people with disabilities in this or any other generation to become designers (C. Jones)

We need to be concerned about the complacency factor among the baby boom generation, which expects everything to be o.k. when they are older. They may be rudely awakened if the smaller generation coming behind them does not want to support, as taxpayers and voters, programs that will make the baby boomers' environment more user-friendly. (Moore)

Business & Industry

It's important to educate manufacturers so they get away from thinking about "special design" for limited populations, i.e. don't let manufacturers think they can design a cup for non-disabled people and one for a special audience. (Moore)

The American Hotel and Motel Association was, like many individuals and institutions in America, fearful about dealing with disabilities. But it has put out a guide on how to make accommodations accessible and now sees a market opportunity in appealing to larger segments of our aging population. (Salmen)

Examples of advertising and developing market strategies that appeal to and include people with disabilities: Burger King, Nike shoes, Levi jeans, etc.

Codes and Standards

As an architect, I'd like to see codes and standards simplified. It takes a book just to explain them. Descriptive materials should not just show diagrams for the minimum required. Diagrams aren't conducive to problem-solving. Codes should also tell why to do something a particular way. Clients sometimes want to go by the book, so an architect needs to know how to explain the "why" as well as the "how." (Wyatt)

ANSI and other standards are paperweights that gather dust; they are used after the fact to double-check a design -- not as a tool while designing or at the beginning of the conceptual process. (D. Jones)

As long as we design a few special things and places for a few special categories of people, we will always fail at introducing the concept and practice of Universal Design. Current codes and standards are framed this way. After 15 years of working to change federal standards and state codes, I know that codes alone are not the best vehicle for influencing change. They are an important and necessary tool, but alone, they can too easily perpetuate a minimalist, segregated approach. (Mace)

We teach people that creating environments for children does not merely mean sticking specific pieces of approved equipment into a space. The Army, for example, has adopted a 100 square feet of space per child as a minimum for playgrounds built on its facilities, rather than adopt minimum types of play activity desired for all children and then let those dictate the space and equipment requirements. (Goltzman)

Designers need to be trained on how spaces are actually used. No amount of minimum standards can substitute for an understanding of people's needs and an appreciation of their inherent dignity. For example, there have long been two standards for toilet stall design, one with grab bars and a high seat, which is helpful for older people, and one which is five feet square, designed for wheelchair access. The problem is that most standards merely require one or the other. A universally designed facility would have a mix of both. (Mace)

Americans with Disabilities Act

The ADA and the Fair Housing Act of 1988 are good 2-by-4's we can use to get the attention of designers and their clients, but the requirements of federal legislation are not the only or even the best bases for changing people's attitudes and actions longterm. (Mace)

ADA represents an opportunity not to force people to focus on accessibility and better design because of the legal requirements and the fear of getting sued, but to present Universal Design as a very challenging and exciting opportunity for designers and their clients. (Mueller)

The ADA is already bringing questionable rehabilitation "experts" out of the woodwork, people who are exploiting the fears many in the business community have about the requirements and impact of ADA. These "bandits" are making money doing analyses and designs for building owners, but spreading misinformation and shoddy design solutions in the process. The Dole Foundation in Kansas City is paying for an educational program directed at Chambers of Commerce in areas of the Midwest where this is happening, but it has the potential of undermining the benefits of ADA. (Austin)

Within nine months of passage, the Justice Department is to publish in the Federal Register the technical assistance plans of all federal agencies. Justice will also issue regulations governing public access. The Equal Employment Opportunities Commission will issue regs on places of employment; DOT, for transportation and the FCC, for interstate communications systems, covering technologies such as TDDs. The ATBCB will issue "minimal guidelines" which will be submitted to Justice and the other agencies and most likely be referenced by them in their own guidelines. The ATBCB also will work with these four agencies to revise the Uniform Federal Accessibility Standards in light of the ADA. All federal agencies must apply to the ATBCB for a variance from these standards. (Lusher)

Information and Outreach

People don't understand what design can do for them...how their lives could be made easier with a little bit of attention to good design. (Lusher)

Who are the "gatekeepers" we need to reach? These are the individuals and institutions that control the flow of information to decision makers whose actions will shape the environment. They may include the U.S. Chamber of Commerce, the Building Owners and Managers Association, the Construction Industries Institute, the National Association of Realtors, boards of trade, code officials etc. (Austin)

Rather than focus on stopping people who may be exploiting the situation and spreading misinformation, let's empower people to go out and do the right thing. This would be analogous to IBM's making its chips available to manufacturers of clones.

We're assuming people want information and many of them don't at this point. We should work with the Ad Council to create a pervasive ad campaign to reach U.S. consumers with information on Universal Design and stimulate understanding and a demand for more. (C. Jones)

We should combine education of the public about Universal Design with education on what design itself is. Also, NEA should consider working with the NEH on joint Universal Design projects and encourage the state councils to do the same. One example is the Utah Arts and Humanities Education Alliance. (Kingston)

What sources of information are there already? Different agencies and organizations reach different constituencies:

- o The Architectural and Transportation Barriers Compliance Board (ATBCB) has distributed a timeline and factsheet on the ADA and as part of its ongoing programs has an 800 telephone number (800/USA-ABLE), provides limited technical assistance, and produces technical bulletins. (ATBCB, 1111 - 18th Street, N.W., Washington, DC, 202/653-7834)
- o Since the National Center for a Barrier Free Environment closed, its research collections have gone to the Paralyzed Veterans Association, which has a technical assistance division, but does not operate a data-base. (PVA, 941 N. Capitol Street, N.E., Washington, DC, 202/289-1415)
- o National Rehabilitation Information Center (NARIC) is a library and information center on disability and rehabilitation established by the National Institute on Disability and Rehabilitation Research (NIDRR), a division of the Office of Special Education and Rehabilitative Services, U.S. Department of Education. The Center has a collection of over 30,000 materials on rehabilitation, independent living, assistive technology, public policy and research, including NIDRR-funded projects. It provides referrals, searches and citations from its database (REHABDATA), photocopies of documents, newsletters and other publications. (NARIC, 8455 Colesville Road, Suite 935, Silver Spring, MD, 20910-3319; phone: 301/588-9284 or 1/800/346-2742; NIDRR: 202/732-1134.)
- o The National Association of Home Builders National Research Center is developing a Housing Accessibility Information System under a contract from the ATBCB. The system will contain information on the needs of particular user groups (visually-impaired, mobility-impaired etc.) and ways to make different residential environments (kitchens, bathrooms etc.) accessible. The system, to be available in late fall, 1990, will consist of both hard copy and computer diskette versions. NAHB will also incorporate the information into its own on-line database, NAHB-Net, which is a purchase service available to home builder associations and major developers. NAHB hopes to update the database annually and plans to publish a housing access products catalog for builders. (Project director: Liz Kooche, 301/249-4000)
- o The Center for Accessible Housing, was established in July, 1989, at NC State University's School of Design in Raleigh, NC, with five-year funding from NIDRR. The Center will undertake research and provide training and technical assistance to improve the design and development of accessible housing and of products for use in the home. It will cover topics in architecture, landscape architecture, interior and product design, as well as issues of financing, zoning, legislation and social issues. The Center is creating a Housing Design Advisory Network composed of people with disabilities as well as their friends and family members who will provide opinions, review ideas and evaluate programs and product designs. (Box 8613, Raleigh, NC, 27695, 919/737-3082)
- o The SERIES computer network is an electronic bulletin board currently managed by the Center on Human Development at the University of Oregon, under a five-year grant from NIDRR. The program provides toll-free computer access to the bulletin board for Independent Living Centers, Independent Living Service Providers, principal investigators

for NIDRR research projects and other approved users. Registered subscribers can make inquiries, send messages to fellow users and get information about upcoming conferences, funding sources and the like. (Center on Human Development, University of Oregon, Eugene Oregon 97403; phone: 503/346-3591)

- o The American Association for the Advancement of Science is putting together three booklets with funding from the National Science Foundation. The target audience will include scientists and engineers. The topics will be 1) how to make meetings accessible, including considerations in choosing accommodations and facilities, 2) how to make classrooms and laboratories accessible and 3) a resource list of approximately 80-100 individuals to whom AAAS regularly refers inquiries on accessibility. AAAS also publishes a directory of scientists, engineers and architects who have disabilities. (Project on the Handicapped, AAAS, 1333 H Street, N.W., Washington, DC, 20005; phone: 202/326-6667)

Others:

- o Disability Rights Education and Defense Fund (1705 Stuart Street, Berkeley, CA 94703; phone: 415/843-4062)
- o National Information Center on Handicapped Children and Youth (1555 Wilson Boulevard, Arlington, VA; phone: 703/522-3332)
- o Job Accommodation Network (a job match service for people with disabilities, funded under the Job Accommodation Act through the President's Committee for the Employment of the Handicapped, Department of Labor; phone: 1/800/526-7234)

Training and Certification

The hardest type of design is when there are no constraints. Students learn better when they are presented with challenges that include specific constraints. Thus Universal Design scenarios can be presented as a positive opportunity for teaching the process of design. (D.Jones)

We have managed to get changes made in the questions asked on the licensing exams for architects, but over time this has not seemed to have a major impact on the attitudes and practices of architects. Perhaps what is needed is a series of modular training programs -- designed for people working at all types and levels of design -- leading to some sort of certification in Universal Design or, at a minimum, in ADA regulations and methods for complying with them. (Mace)

The process of changing licensing exams can take years. In the case of landscape architects, the examinations are revised on a regional basis. (Austin)

In the case of industrial design, there is an accreditation program for schools, administered jointly by the Industrial Design Society of America and the National Association of Schools of Art and Design, but as of yet, there is no program for the testing and licensing of individual professionals. (Moore)

For ADA or Universal Design, it would be good to use the existing network of the Centers for Independent Living and DREDF, the Disability Rights Education and Defense Fund. A train-the-trainers program could be developed with the CILs as the core group to be trained first and then provide training to individuals in their respective areas. (Lifchez)

There is a pressing, short term need in 1990-91 to provide some type of training on ADA and Universal Design practices. It should involve disabled individuals. (Mace)

We need to use all the different networks (DREDF, CILs, the Association of Collegiate Schools of Architecture, etc.) and create training links among them. Perhaps create, in addition to a training program, a database of those who have been certified and an 800 number to find out about them. (Salmon)

Examples of previous training programs:

- o The training program created for the 504 regulations provides a model. It involved intensive grassroots training backed up by a technical assistance component, i.e., people to call in a pinch. (Mace)
- o Massachusetts has a program to train people with disabilities as Community Access Monitors to evaluate and advise communities on state access requirements and compliance methods. If all else fails, the monitor files a complaint to the state enforcement agency. (Ostroff)
- o California's smog control program is a good model of a train-the-trainers format. In another effort, about ten years ago, we created a self-assessment workbook for the State of California, which all state vendors were required to use in evaluating their accessibility. The workbook required using disabled individuals to do the assessment. (Lifchez)
- o June, 1990, training on the Fair Housing Act Amendments, sponsored by the Center for Accessible Housing at N.C. State University. It was a train-the-trainer program (Ostroff)

The ATBCB plans to hold 30 seminars across the U.S. in FY'91 and '92, for free, if its budget allows. The seminars would be targeted primarily, but not exclusively, to building code officials. They are also exploring ways to support the program off-budget, such as through the sponsorship of organizations like the National Conference on Building Codes and Standards. (Lusher)

Symbols

We need a new symbol for access; the wheelchair logo only connotes mobility impairment and may reinforce the us-versus-them mentality that impedes Universal Design. Perhaps the NEA could sponsor a design competition that would get people thinking about these issues afresh in the 1990's -- and lead to a better design.

It would be preferable to get away from the need to have any symbol at all. For example, if a parking lot were designed according to Universal Design principals, there would be no need to differentiate certain spaces for use by people with wheelchairs.

Even aside from the needs of wheelchair users, however, parking spaces are often designated for different sizes of vehicles. We still need to have symbols to distinguish different spaces.

Rather than have a symbol for places and buildings that are accessible, why not a symbol for those that aren't. This might force non-disabled people to realize how unaccommodating the environment is.

While it would be nice to get away from the wheelchair symbol, or from any symbol, the fact is that the stylized wheelchair has become universally accepted. Rather than expend energy designing and then trying to implement a new symbol system, let's work to change the environment itself.

Empathetic Simulation

Simulation exercises can be used to give non-disabled people a sense of what it is like to maneuver in the world with some type of mobility or sensory impairment. It can help people experience the disabling impact of a poorly designed environment rather than merely intellectualize about it.

Simulations are dangerous because they can too easily give people a distorted idea of what it is like to have some type of disability. People who are placed in wheelchairs or blindfolded etc. are

most worried about how others will see them, not about the technicalities of making it through an exercise. Simulations can thus focus people's attention on the limitations and reinforce negative stereotypes of "cripples" rather than show them the strengths and positive abilities of people who manage despite their impairment to work and play in the world with dignity. (Lifchez)

Simulations work best when they are run by people with disabilities so that they can offer proof of what is possible and positive, dispel misconceptions and anxieties and talk with participants about what is really difficult and what is not. (Mueller)

Teaching Design

Working Group Report:

Who are the target audiences for any information about the teaching of Universal Design? Students and teachers in all the design disciplines: architecture, landscape architecture, interior design, and industrial design, including products, packaging and fashions. While emphasis should be placed on stimulating innovations in design education at the collegiate level, attention should also be paid to two-year community colleges that award associate degrees in the design arts or related fields, as well as to secondary and elementary school students. Other targets for information include school accreditation teams, professional licensing authorities, rehabilitation engineers and technologists, people with disabilities, facilities managers and "signature" designers (i.e., the "heroes" within each profession). The emphasis should always be on educating people in the philosophy of Universal Design rather than merely in specific techniques.

Attention should be paid to the politics and incentive systems operating in academic settings. Innovations in teaching techniques and curriculum materials should be carefully evaluated. Successful models should then be rewarded by being featured in publications and audio-visual productions, public relations campaigns, awards programs and other methods that will reinforce the specific accomplishments of teachers and students and validate for other designers and members of the public the importance of Universal Design. Good documentation and publicity can also produce more demand at the grassroots that Universal Design be integrated into many types of educational programming. The objective should be to inspire rather than to coerce.

Recommendations:

1) Accreditation

NEA should convene a meeting/symposium of accreditation organizations (the National Architectural Accrediting Board and the National Council of Architectural Registration Boards, etc.), together with representatives from the Association of Collegiate Schools of Architecture the design societies (AIA, ASLA, IDSA etc.). The purpose of the meeting would be to discuss the current status of Universal Design instruction and methods for evaluating this important component of design education. The emphasis should be on learning what the accreditation teams need to do their job -- and on including people with disabilities in the accreditation process.

2) Curriculum materials

NEA should fund the development and distribution of design problems that could be used by any number of educators in their studios and other classes. This should not be a "cookbook" of problems and solutions, but a series of case studies documenting real world situations. The information would profile user needs, show photographs and diagrams of existing conditions and list the relevant federal standards and state laws that would apply in the situation.

Teachers could use these materials to write their own project statements or provide students with the case study problem but not the solution. Students could then develop their own design responses for review by their professors. In addition to producing project statements for adaptation by design teachers, it might also be possible to create an annual, publicized program in which the design responses of students at many different schools could be shared through professional or student publications or other means. Students could see how their peers had responded to the same criteria and, if the statement were based on a project that actually got constructed, also evaluate that design. Such a national program could also be developed as a competition with awards and reap more coverage in both professional and popular press. j

3) Mentors & resource referrals

NEA should help fund a project to publicize the availability of materials and resource people to whom design educators can turn now. The project should also be able to update its information as new materials or innovative programs are developed. Giving visibility to these individuals and resources is important. The project might include a faculty development/mentor program to bring teachers experienced in Universal Design together with other design educators.

Discussion:

Academic institutions have their own internal life cycles and reward systems, which can impede changing or influencing them, especially from the outside. Among the incentives that might motivate someone to teach a new subject or to tackle an old subject in a new way are 1) tenure (i.e., if the change ultimately has an impact on income and security), 2) public attention and reputation (provosts and other officials routinely ask what the "public" thinks of a faculty member) and 3) validation for what the person is doing (professional societies and organizations such as the NEA, the Association for the Advancement of Science and others can play an important role here). Thus it is necessary to know the internal politics and incentives operating within an institution in order to know the best entry points for introducing change. The best process is one where the validation and public attention garnered as a result of innovation comes full circle and results in gainful employment and career advancement. (Lifchez)

Competitions can be a good way to focus design students' attention on certain topics. Armco Steel, for example, used to choose three schools each year to participate in a competition, providing money to the schools to use during the course of the year to bring in special speakers. One year "birthing centers" was the topic. It was a real boost for the students.

Mainstream magazine held a competition last year to honor the best university students with disabilities. The article profiling the winners emphasized the diversity of their pursuits and abilities. It also featured frank comments about the things they still found difficult and a sidebar describing the degree to which the school and its campus facilitated participation by people with disabilities. The same sort of thing could be done to highlight the accomplishments of design students with disabilities and at the same time raise questions about the nature of their campuses and course instruction. (C. Jones)

On the dissemination of design problems, it would be best to give teachers maximum flexibility to adopt or adapt information from the case studies into their own project statements. They might resist being given a set piece to pass on to students, but might appreciate being given a set of facts or design parameters they might otherwise not have at their fingertips, such as the most pertinent standards and regulations that would affect the design of a movie theater in Seattle or affordable housing in Oakland. Remember that design schools aren't so much teaching how to design specific things as how to approach problems and how to think about solutions. Anything that can enhance that process would probably be welcomed by teachers. (Lifchez)

Another type of design education exercise that might be valuable would be to take a project featured in Progressive Architecture or a well-known project by one of any given discipline's "signature" designers and then analyze its responsiveness according to Universal Design

principals. Ask signature designers to participate in the development of project statements on Universal Design situations, which could then be disseminated to schools and students around the country. Get them involved in teaching some design studios using these project statements. Use their involvement to get publicity in professional, trade and popular press. (The risk of this approach is that not all signature designers are sensitive to Universal Design; example of Graves's arts complex in Newark which is not accessible.)

For buildings and public spaces, this analysis could also include a "pathway video" which would take the viewer through the finished space from the point of view of people with different types of mobility or sensory impairments. (Goltsman)

If the NEA were to send out a Request for Proposals seeking the development of new instruments for teaching Universal Design, it is likely that a number of schools of design would respond. (Lifchez)

Professional Practice

Working Group Recommendations:

The underlying theme of the group's recommendations is "turning practice into progress." The activities recommended for NEA consideration fall into one of two broad categories: activities that will educate design professionals and their clients and those that will promote design excellence, recognizing exemplary current work and stimulating the creation of the finest new work in Universal Design.

1) Create and Support "Champions"

Every design profession has its "heroes" or "signature designers whose work is influential, whether it is admired, emulated or slavishly imitated. It would help promote greater understanding to arrange with key individuals in each of the design disciplines to have a Universal Design team assist them on a well-documented and publicized project. The result would be to create additional champions for Universal Design who could continue to endorse, write about, teach and practice this approach.

2) Poster Series

Create a series of stunning, superbly designed posters on the theme of Universal Design and distribute them nationally to professionals and schools of design, as well as to relevant organizations, agencies and manufacturers. This was done several years ago by a company wishing to advertise its products; the poster series, showing fragments of historic architecture, was mailed to every architecture firm in the country. The design was so compelling that the posters immediately went up on the walls and were eagerly sought out by students and others. Using good design to convey messages about Universal Design can be a powerful and pervasive way to get the attention of design professionals.

3) Corporate "Intensives"

Intensives are special in-service training programs offered by businesses to government agencies, corporate clients and design firms to introduce them to emerging technologies and products. Companies have sometimes sponsored seminars or workshops in a city and then used the occasion also to send representatives for more in-depth explanations for the key staff of individual companies. One example of this is a company that has underwritten Progressive Architecture seminars in several cities and simultaneously holds private workshop lunches for key companies. The advantage of in-service workshops for a single company is that employees feel free to ask questions without revealing corporate information to competitors. NEA could help sponsor Universal Design intensives for major manufacturers, government agencies and design firms.

4) Subject Videos

NEA should support the production and distribution of "PBS-quality" videos on Universal Design topics in each of the design disciplines.

5) Clearinghouse Interface

NEA should support the examination of technology to create an interface among existing professional societies and databases containing information on Universal Design topics. This would facilitate searches and promote an interdisciplinary approach to problem solving.

6) Publication Technical Groups

If any publication is developed to cut across disciplines and disseminate information on Universal Design, it should have as an adjunct Technical Groups by discipline which could advise the editorial staff. In addition, such tech groups could periodically produce single-sheet bulletins which could either be distributed as a page of the newsletter or as special bulletins. Professionals often find such pithy information easy to scan when received and easy to retrieve from office files. Also, with the widespread use of FAXs, designers are likely to pass good, concise information quickly to even wider networks of contacts.

7) Exhibit Booth

NEA should support the production of an exhibit booth on Universal Design which would be easy to ship and erect at the design society meetings, trade fairs and conferences held by disability organizations and relevant government agencies. Such a booth should be visually arresting and superbly designed, not the typical dumping ground for printed materials. Ideally it should be staffed by an expert in Universal Design who could field questions from conference or trade fair attendees. If graphics and other information were updated periodically to give it a fresh appearance and if its distribution were well organized with return appearances at the same major gatherings each year, such a booth could gain a reputation as the place to stop for the latest information on Universal Design.

8) Awards

Annual awards should be offered for the best of Universal Design in any discipline. The recognition given to awards ceremonies in both the professional and popular press is an excellent way to reinforce the desire of designers to go beyond minimum requirements. If a Universal Design publication is created, it might sponsor both the awards and the exhibit booth, using the latter to showcase award winnings during the following year.

Discussion:

If a speaker's bureau were created for Universal Design, it could not only provide lecturers for design schools and conferences but also be the vehicle for staffing "corporate intensives." In Canada the government has taken an interesting approach by hiring experts to visit private sector firms. The Province of Ontario, for example, hired Moore & Associates to visit every advertising agency in the province with an educational seminar. (Moore)

An example of the lingering influence of videos is a Bradley Corporation video on toilet stall design, originally produced for the company's sales representatives. The intent was to tape comments by experts and condense them to a brief video introduction. But sales reps found the hour and a half dialogue so valuable that the tape was never condensed and has remained in circulation for over ten years. (Mace)

A good example of the widespread dissemination of Fax-able bulletins are the "Tech Group Update Sheets" produced periodically by the Human Factors Society. These are generally reprints

of articles with extra information or commentary added. The proliferation via FAX creates a momentum of its own, as well as a sense of urgency. (Moore)

Another possible tack to take on awards would be to try to influence existing awards programs run by professional societies, organizations and government agencies to change their criteria so that include Universal Design considerations. The risk is that instead of the new criteria applying to all projects submitted, the competition may merely create a separate category for Universal Design. IDSA, already does this with a special category for "universality." Such an approach may be risky because it can reinforce in the minds of competition sponsors, applicants and viewers that universal design is limited to special populations, such as those requiring prosthetic devices. (Goltsman/Moore)

One danger with architecture awards programs for Universal Design is that it is often difficult if not impossible to evaluate a building comprehensively. Almost every building has some flaws. One alternative would be to ask a designer to submit any element of a building that he or she thinks exemplifies good access rather than submit the design of the entire building. This is the approach being taken in a Colorado awards program being organized by Denver architect Peter Orleans. (Mace)

Publication and Clearinghouse

Publication

Why is a publication needed? There is no broad-based publication at present, nothing that cuts across the design disciplines or reaches students, practitioners and decision-makers. A publication would give visibility for ongoing efforts in universal design by many different players. It would bolster the credibility of those who are practicing Universal Design, expand the consciousness of readers beyond codes to a truly universal approach, and provide pragmatic information to meet the needs of designers.

Previous references have been made to this publication as a Universal Design Journal, which implies a more massive, slick publication, with scholarly articles as well as technical pieces. The working group recommends starting at a more modest level with a Universal Design newsletter of perhaps eight pages, published initially on a quarterly basis. AIA's Practice was shown in the working group meeting as an example; it is sent to every licensed architect. There was consensus that design professionals tend to read these newsletters first before tackling the heavier, glossy journals.

The publication would need to be started under the aegis of an organization with 501(c)3 status in order to receive start-up grants from the NEA, foundations and other donors. This could be the non-profit arm of one of the major design societies, such as AIA's American Architecture Foundation, or ASLA's Landscape Architecture Foundation, or the Worldesign Foundation, associated with, though separate from, IDSA. Since there is currently no single non-profit organization representing all aspects of Universal Design, it may be necessary eventually to form one and have it publish the newsletter. In either case, the publication would need a multi-disciplinary editorial board.

Randy McAusland, former president of Design Publications Inc., which publishes International Design Magazine, and Acting Deputy Chair for Programs at the Endowment, participated in the working group's meeting. He recommended taking a modest, pragmatic approach and even considering the use of desk-top publishing to keep costs down. He estimated that it would take 9 to 12 months to get a start-up publication in the mail and at least three years to become self-sufficient.

One way to introduce the newsletter to design professionals would be to seek the assistance of the major societies, which might be willing to distribute the newsletter as a "blow-in" in their own journals or newsletters, whether or not these are mailed in plastic wrappers. If the Universal

Design newsletter is non-profit and low weight, it should not jeopardize the postal status of the larger publication. Mailing lists would most likely need to be purchased to send the newsletter to other audiences, such as libraries, schools, students and possibly to other audiences like building managers or realtors who might not subscribe on their own.

A major decision would be whether to continue to distribute such a newsletter for free, either as a blow-in or as a self-mailer or to go into the subscription business. The former route would necessitate continual fund-raising, but it might be possible to maintain the support of major design publications on the insert distribution as their charitable contribution. If the publication also sought advertising in order to avoid a subscription charge, however, the professional journals might be less interested in providing such assistance. If the newsletter were to seek subscribers, it is also doubtful that it could count on the professional societies or other organizations to provide it with free mailing lists or donated distribution services.

Another start-up option would be to produce a sample newsletter and do a direct mail campaign to solicit subscriptions. Cyndi Jones estimated that a direct mail piece (@ \$.40) would cost \$40,000 to send to 100,000 potential subscribers. Depending on how well the targeting was done, the newsletter could expect a 3-5% return. All members of the working group agreed that for a new publication to achieve credibility and a broad-base readership, continuity and quality would be essential.

The working group concluded that the first step toward establishing a publication or clearinghouse would be to develop a comprehensive communications strategy, which could then be used as the basis for proposals to corporate or charitable foundations for start-up funding. Such a planning grant could be sought from the NEA either by an individual (up to \$15,000 on a non-matching basis) or by an organization, which could be a chapter of one of the design societies, one of the design foundations, a university-based program etc. (grants of up to \$50,000 on a 50/50 matching basis).

Clearinghouse

Because any entity publishing a newsletter on Universal Design would necessarily become a magnet for information and for questions, the working group discussed the possibility that this entity could also serve as a national clearinghouse on Universal Design. A clearinghouse should have 501(c)3 status to receive grants or donations and to qualify for lower postal rate. It should also have an interdisciplinary board. A clearinghouse could feed information to the publication, re-publish materials from ATBCB that are in the public domain, sponsor workshops initially created by ATBCB, publish additional technical pieces as needed and possibly create and manage an on-line database of information for designers and consumers.

The working group discussed previous clearinghouses and currently operating databases. The National Center for a Barrier Free Environment had an annual budget that ranged from \$200,000 to \$500,000. It offered an information referral service, published technical bulletins and information kits, sponsored training seminars and conferences, supported the production of a video on Ray Lifchez's experiment in teaching architecture with disabled consultants, and developed a curriculum guide in conjunction with the Adaptive Environments Center. Despite widespread acclaim and use of its services, the Center never achieved self-sustaining, break-even status. In 1985, having seen federal support diminish and fearing personal liability for the organization's deficit, the board of directors voted to close the Center.

The working group identified several on-going information referral services and on-line databases (listed above, under Information/Outreach). The group also discussed the possibility that a fledgling clearinghouse might need to start under the auspices of an existing non-profit. The Adaptive Environments Center, Rochester Institute of Technology, and Partners for Livable Places (which manages the "Livability Clearinghouse" for the Design Arts Program), were mentioned as possibilities. A Universal Design clearinghouse, however, would need to have its own activist planning director to seek funding and supportive partnerships with organizations in the design and disabilities arenas. It would also need a full time editor to supervise the publication and

possibly to seek placement of articles on Universal Design in other publications. Whether the clearinghouse would offer information referral services or actually create and operate a database, it would also need staff for these services.

Discussion

A Clearinghouse could operate as a "switching service" to other repositories of information. The technology is available but hasn't been applied yet, though the National Science Foundation is looking into possible applications. (D. Jones)

One problem with an on-line database for Universal Design information is that current systems do not transmit and reproduce graphics with the quality needed by designers. Also some of the information needed by designers is not linear but 3-D demonstrations of how spaces or products work. (Mace)

There are graphics interface standards; it's a question of the clearinghouse defining what kind of quality it wants to maintain. ECAT, for example, is an electronic catalog which includes CAD drawings architects can access via a modem. There are also technologies such as laser disc and CD-ROM which convey text, linear graphics and full-motion video. But at the outset of establishing a publication and clearinghouse, we should be cautious about introducing too many layers of high-tech. (D. Jones)

One possibility that should be explored is to see what information referral functions could be served by the Design Arts Clearinghouse, which is being expanded in the coming year. NEA's intent is to make the clearinghouse a more comprehensive source of design information than merely the final reports and products generated by past Design Arts grants. The new clearinghouse will also involve more active outreach to the public, replacing earlier efforts to have providing assistance to state arts agency design programs and to potential applicants through regional representatives. While the Design Arts clearinghouse should certainly contain information on Universal Design and know how to refer inquiries to other sources, it is unlikely that it could serve all the functions envisioned for a new 501(c)3 organization on Universal Design.

A conference to consider a communications strategy should also focus on the need to get Universal Design information into existing publications beyond those oriented to design professionals. (C. Jones)

A Universal Design publication could help throw some limelight on innovative work being done by both teachers and students in schools and thus provide some degree of recognition and incentive to those who innovative work is not being recognized elsewhere. It is important, however, that the publication not become pigeonholed or stigmatized as a "disability rag" or it will fail to reach and influence its intended audiences. (Lifchez)

One potential challenge in getting existing design societies to support Universal Design either by featuring periodic articles on the subject or by inserting a quarterly newsletter into their own publications is that they generally draw a firm line around their editorial content. Planning magazine, for example, won't publish anything that smacks of landscape architecture. They might balk at blowing in an inter-disciplinary publication that does not fit within their own parameters. (Austin)

That may be a reason for housing the new publication in the disability field or in some other type of non-profit to avoid internecine struggles between design societies. (C. Jones)

Ideally, this publication would feature more than just design information. It should weave together technical information, educational information on the philosophy of Universal Design, sociological information, legal information etc.

One possible model of a 501(c)3 to undertake a publication, clearinghouse and other functions described earlier would be the Arthritis Foundation, which publishes a newsletter, has a speakers bureau and gives awards (its Seal of Approval) to products which are easy to use by people with arthritis (one example is Tide's pop-top box). (Moore)

Before convening any meeting to examine the feasibility of proceeding with a publication or clearinghouse, perhaps it would be useful to commission a series of essays from people like Bill Moyers, Garrison Keillor, Kurt Vonnegut etc. on the subject of what universal design means to them. Such individuals, while not designers, can inspire through language, providing fresh, powerful images that can help explain the issues to corporate and other decision makers and to the general public. (Lifchez)

Recommendations

- 1) NEA should create a special Leadership Initiative on Universal Design to support the holding of a two-day conference with representation from all the design disciplines (including their publication directors), existing disability clearinghouse operations and disability rights groups such as DREDF and the National Council of Centers for Independent Living. The conference would examine the need for a cross-disciplinary approach to information dissemination on Universal Design, review what is already being done, and make recommendations concerning a comprehensive communications strategy.
- 2) NEA should support either through the regular grants process or through a special Leadership Grant a planning grant to a qualified non-profit entity to prepare a communications strategy on Universal Design, including a business plan for any publication or clearinghouse suggested.
- 3) NEA should support the start-up costs of a Universal Design publication through an initiative or seed grant.

ITEM 24. NATIONAL ENDOWMENT FOR THE HUMANITIES

JANUARY 4, 1991.

DEAR SENATOR PRYOR: I am pleased to enclose a report summarizing the major activities for or about the aging supported by the National Endowment for the Humanities in fiscal year 1990.

Many of the projects that received Endowment support during the past year either involved older Americans as grant recipients or project contributors or were of particular interest to them. Several also specifically addressed older persons as an audience or aging as an issue. But the potential of NEH for older Americans does not stop there. The products resulting from all Endowment programs are available to older Americans for their personal enjoyment and enrichment—from the books and articles written by humanities scholars to the film and radio programs and reading and discussion groups supported by our Public Programs division.

The State humanities councils have also been very active in developing programs for or about the aging, and a number of their efforts are summarized in the report. Anyone wishing further information on the State councils' activities in this area is invited to contact NEH or any one of the councils.

I hope that you and your committee will find this material useful. Please let me know if we can be of any further assistance.

Sincerely,

LYNNE V. CHENEY,
Chairman.

Enclosure.

NATIONAL ENDOWMENT FOR THE HUMANITIES REPORT ON ACTIVITIES AFFECTING
OLDER AMERICANS IN 1990

I. THE MISSION OF THE ENDOWMENT

The National Endowment for the Humanities was established by Congress to support the advancement and dissemination of knowledge in history, literature, philosophy, and other disciplines of the humanities. NEH grants sponsor scholarship and research, promote improvements in education, and foster greater public understanding and appreciation of our cultural heritage. Grants are awarded in response to unsolicited project proposals and on the basis of evaluative judgments informed by a rigorous process of review. The agency does not set aside fixed sums of money for work in any discipline or for any particular area of the country or group. As a result, there is no grant program at NEH specifically for senior citizens, nor is there a funding category within the agency expressly designed to support the study of aging or the elderly. Rather, projects for or about senior citizens may receive support through the full range of Endowment programs.

Although the Endowment does not have programs specifically related to aging, NEH-supported books, lectures, exhibitions, productions for radio and television, library reading and discussion programs, and adult education courses help bring the humanities to senior citizens. In addition, each year a number of scholars, 65 or older, receive NEH funding to conduct research in the humanities, while others assist the Endowment by serving on grant review panels or as expert evaluators.

II. PARTICIPATION BY OLDER AMERICANS IN NEW PROGRAMS

Older scholars compete for Endowment support on the same basis as all other similarly qualified applicants. Applications for funding are evaluated by peer panels and specialist reviewers, Endowment staff, the National Council for the Humanities, and the NEH Chairman. Only applicants whose proposals are judged likely to result in work of exemplary quality and central significance to the humanities receive support. However, anyone may apply for an NEH grant, and no one is barred from consideration because of age. Each year numerous projects are funded that involve older persons as primary investigators, project personnel, or consultants.

The Jefferson Lecture in the Humanities is the highest official award the Federal Government bestows for distinguished intellectual achievement in the humanities. Since its establishment in 1972, the lecture has provided an opportunity for 20 of the Nation's most highly regarded scholars to explore in a public forum matters of broad concern in the humanities. Not coincidentally many of the scholars so honored have been among the most senior members of their profession. Gertrude Himmelfarb, who will deliver the 1991 Jefferson Lecture, Bernard Lewis, Walker Percy, Robert Nisbet, and Cleanth Brooks are among the recent Jefferson Lecturers who were 65 years of age or older at the time they received this honor.

The Endowment's Charles Frankel Prize, first awarded in fiscal year 1989, honors individuals who have made an outstanding contribution to the public's understanding of history, literature, philosophy, and other humanities disciplines. To date, fully half of the Charles Frankel Prize recipients have been senior scholars and interpreters of the humanities who were 65 years of age or older. These distinguished Americans are: Daniel Boorstin, Librarian of Congress Emeritus and historian; author and folklorist Americo Paredes;

Mortimer Adler, philosopher, prolific author, and originator of the Great Books program; classicist Bernard Knox; and Ethyle Wolfe, who helped establish Brooklyn College's highly regarded core curriculum.

Older scholars are particularly evident in several types of research and teaching projects supported by the Endowment's Fellowships and Seminars divisions and Research Programs division. Of course, this is merely a reflection of the depth and breadth of knowledge that many senior scholars bring to their work in the humanities. In a number of cases, older scholars are receiving NEH support to continue long-term, collaborative research projects that they have directed and sustained for many years. In fiscal year 1990, NEH support for the research and teaching efforts of scholars, 65 or older, included the awarding of 5 Fellowships for University Teachers totalling \$135,000, 6 grants totalling \$502,527 to direct Summer Seminars, 14 grants totalling \$710,358 to produce scholarly editions, and 5 grants totalling \$624,792 to produce research tools and reference works. Among the senior scholars whose continuing contributions to the humanities were underwritten by the Endowment during fiscal year 1990 were:

- Joseph N. Frank of Stanford University, who is completing a study entitled "Dostoevsky: The Struggle Against Nihilism, 1865-70," the fourth volume of a planned five-volume literary biography of the author;
- 1983 Jefferson Lecturer Jaroslav Pelikan, who will produce a study entitled "The Future of the University";
- Gregory Vlastos of the University of California, Berkeley, who directed a Summer Seminar for University Teachers on the philosophy of Socrates;
- Martha Brown of Old Dominion University, who will direct a Summer Seminar for School Teachers on African American women's autobiography;
- Frederick Burkhardt, who, under the auspices of the American Council of Learned Societies, is preparing an edition of the correspondence of Charles Darwin;
- William Abbot of the University of Virginia, who is preparing an edition of the papers of George Washington;
- Frederick Cassedy of the University of Wisconsin, Madison, who is producing volume 2 of the *Dictionary of American Regional English*; and
- Erica Reiner of the University of Chicago, who is continuing work on the *Chicago Assyrian Dictionary*.

Older Americans also participated in NEH programs by serving as grant review panelists, specialist reviewers, or members of special advisory groups. Beatrice Patt, Emeritus Professor of Romance Languages at Queens College; Gerald Straus, Distinguished Professor of History at Indiana University, Bloomington; Ruth Marcus, Halleck Professor of Philosophy at Yale University; Helen Tanner, independent scholar and editor of the *Atlas of Great Lakes Indian History* (1987); Joel Colton, Professor of History at Duke University; and Norman McQuown, Professor of Anthropology at the University of Chicago are among the senior scholars who contributed their time and talent in this way during fiscal year 1990.

In some cases, older Americans without scholarly training have contributed to Endowment-sponsored projects by providing invaluable information. For example, several NEH-supported projects to document or preserve the Unique cultures of Native American peoples are heavily indebted to older tribal members for their, in many cases, irreplaceable resources of memory and understanding. In fiscal year 1990, \$30,998 was awarded for a project to compile a dictionary of the Hopi language. Another \$93,977 was awarded for a project to collect, transcribe, translate, and annotate the oral traditions of the Tlingit, a major tribe of the Pacific Northwest.

Some of the programs for the general public that the Endowment supports also depend upon the substantive contributions of older Americans. For example, in fiscal year 1990 the Endowment awarded \$65,000 to the Center for Community Studies, Inc., to support planning of a long-term exhibition on the history of the Chinese in New York City. Entitled "Memories of New York's Chinatown," the exhibition will draw extensively from oral history interviews with elderly residents of the community. A \$45,000 grant to the Reno County Historical Society of Kansas is supporting a series of seminars for personnel at historical societies throughout the State on the theme, "World War II and the Kansas Home Front, 1941-1945". Among the

topics to be discussed are ways to tap the unique knowledge of elderly informants in order to produce historical programs for the general public.

Of course, the Endowment achieves its greatest impact among older Americans when they read books, attend public programs, or participate in education and activities made possible by an NEH grant. The humanities programs for the general public supported by the Endowment through our Division of Public Programs and many of the formal learning opportunities supported through our Division of Education Programs reach large numbers of older persons.

Higher Education in the Humanities. Adults of all ages are now returning to college to take courses outside of the regular undergraduate schedule or sequence. According to statistics released by the Department of Education, approximately 63 percent of undergraduate students enrolled on a part-time basis during 1987 were 25 years of age or older, and nearly 2 percent of them were 65 or older. The Endowment's Higher Education in the Humanities program offers support for institutions seeking to make humanities study more accessible to these adults, who may not be adequately served by the conventional structures of higher education. Because continuing education programs are typically offered in local communities at sites such as community colleges, high schools, or public libraries—sometimes supplemented by telecommunications hookups with an instructor at a central location—such programs are particularly well suited to the needs of older persons. As in all Endowment programs, NEH-supported projects for adult learners are intellectually substantive and thoroughly grounded in the scholarship of the humanities.

Humanities Projects in Media. Television productions supported by the Endowment are ideal for older people who cannot or prefer not to leave their homes. Widely acclaimed programs such as the 11-hour historical documentary series, *The Civil War*; the series of dramatic literary adaptations, *American Short Story* and *Life on the Mississippi*; the biographical documentary, *Huey Long*; and *Voices and Visions*, a 13-part series chronicling the achievements of America's outstanding contemporary poets, have been viewed by millions throughout the country. Or, elderly persons who have visual handicaps may find Endowment-sponsored radio programming best suits their needs. For example, the Endowment supported the recent broadcast over National Public Radio of eight 30-minute radio programs that examined the career of New York Mayor Fiorello La Guardia and the history of that city during the 1930's and 1940's. *Tell Me A Story*, NPR's long-running series of half-hour programs in which major contemporary authors read from their short stories and comment on the creative process, and the series of features on art history and criticism on NPR's daily arts program, *Performance Today*, are two more examples of outstanding radio programs that have aired recently with Endowment support.

Information about NEH-sponsored media programs is routinely provided to organizations working for special groups, including the elderly. For many elderly people confronting problems such as impaired vision, reduced mobility, and isolation, Endowment-funded media programs not only provide individual access to the humanities but can also provide the context for stimulating group activities and discussions.

Humanities Projects in Museums and Historical Organizations. In this program, the Endowment encourages museums or historical organizations receiving Federal funding to waive entrance fees for the general public on certain days, an effort that helps make cultural programming more accessible to retired persons living on a fixed income. In recent years, a number of the institutions that have received NEH support for interpretive exhibitions have begun to establish a continuing relationship with local senior centers.

Humanities Projects in Libraries and Archives. By sponsoring reading and discussion programs for adults in public libraries, this Endowment program is helping to make intellectually stimulating activities available to senior citizens in their local communities. During fiscal year 1990, the Endowment awarded \$1.4 million for programs in 46 States that will offer adults, including persons over 65, opportunities to read and talk about important books and issues, and a great many more reading and discussion programs were supported by the 53 State humanities councils. For example, during fiscal year 1990 the Endowment awarded \$170,000 to the American Library Association to conduct a series of reading, viewing, and discussion programs at sites in 25 States. The programs will be offered in conjunction with the national broadcasts on PBS of the NEH-supported television series *Voices and Visions*, which explores the lives and work of 13 major American poets. Participants will view the series, read selections of poetry and essays, hear lectures delivered by scholars, and discuss related issues under the direction of scholars. Another NEH grant to the American Library Association provided \$274,996 to support a nationwide series of

reading and discussion programs about themes related to the Columbian Quincentenary.

III. EXAMPLES OF NEH GRANTS SPECIFICALLY FOR OR ABOUT OLDER AMERICANS

Since fiscal year 1976, the Endowment has awarded approximately \$3.6 million to the National Council on the Aging for its "Discovery Through the Humanities" program. Throughout a network of over 1,500 senior centers and other sites participating in this project, volunteer leaders guide small groups of senior citizens through active, in-depth discussions of the work of prose writers, poets, artists, philosophers, scholars, and critics. Project staff prepare and distribute thematically organized anthologies and ancillary instructional materials and provide training and technical assistance to discussion leaders. The fourteen anthologies currently in use include: "A Family Album, The American Family in Literature," "Images of Aging," "Americans and the Land," "The Remembered Past, 1914-1945," "Work and Life," and "The Search for Meaning." Each anthology is designed to stimulate the group participants to relate what they read to their own experience and to universal human issues. Ranging between 100 and 300 pages in length, printed in large print type, and attractively illustrated with paintings, sculpture, and photographs, each anthology organizes material from history, philosophy, and literature; both the classics and contemporary authors are represented.

In fiscal year 1990, the National Council on the Aging received \$147,545 to conduct 70, 10-week reading and discussion programs through seven public library systems around the country. Existing "Discovery Through the Humanities" anthologies will be supplemented with full-length readings drawn from the collections of the participating libraries. The NCOA also received \$145,000 to develop a new anthology entitled *Roll On River: Rivers in the Lives of the American People*.

The anthology, which will be used initially in reading and discussion programs in NCOA-affiliated senior centers in the 10 states, will draw on autobiographical, historical, and literary writings to enable older adults to place their knowledge and experience in the broader context of American culture.

During the past fiscal year, the Endowment made three other awards for projects designed to inquire into aging-related issues or to make available materials or activities of interest to the elderly;

- \$3,500 for a Summer Stipend that enabled a scholar at New York University to conduct research on the Townsend Movement and American old-age spending policies;
- \$750 that has enabled a scholar at the State University of New York, College at Brockport, to travel to the Archives of American Art in Washington, D.C., in order to examine documentary sources for study of autobiographical reports of aged artists on creativity; and
- \$171,290 to Loma Linda University in California to support a public conference, a lecture series, and a series of community forums, media programs, and publications that will examine ethics and health care for the aged.

IV. STATE PROGRAMS AND THE AGING

The State Programs Division of the Endowment makes grants to humanities councils based in the 50 States, Puerto Rico, the District of Columbia, and the Virgin Islands. These councils, in turn, competitively award grants for humanities projects to institutions and organizations within each State. State humanities councils have been authorized to support any type of project that is eligible for support from the Endowment, including educational and research projects and conferences. The special emphasis in State programs, however, is to make focused and coherent humanities education possible in places and by methods that are appropriate to adults.

Examples of projects for older Americans or about aging-related topics that received State council support during fiscal year 1990 are presented below.

ARIZONA

The Arizona Humanities Council supports a variety of projects on a wide range of topics and formats designed for senior citizens. Many of these projects are lecture or film programs on issues such as the role of women in early Arizona, business ethics, cowboy poetry, and international relations.

CONNECTICUT

The Connecticut Humanities Council's "Humanities Projects for Older Adults" program provides stimulating activities for senior citizens throughout the State. As a large part of these projects, a scholar-in-residence, on loan from the State Depart-

ment on Aging, travels to many communities discussing the cultural and social history of Connecticut.

DELAWARE

Through its speakers bureau, the Delaware Humanities forum offers many lecture and discussion topics for scholar-led programs intended for older adult audiences. Some of the programs that have been funded are: "The Life and Music of George Gershwin;" "Women in the Works of Charles Dickens;" "Our Amish Neighbors;" "The Panama Canal at Seventy-Five: Its History and Importance;" "Delaware's Literary Heritage: A Forgotten Legacy;" and "John Dickenson and the Constitution."

FLORIDA

The Florida Endowment for the Humanities funded six, 2-hour lecture and discussion programs for older adults at the Boynton Beach City Library. A humanities scholar gave lectures and conducted discussions based on the book, *Florida Stories*, edited by Kevin McCarthy.

MISSOURI

The Missouri Humanities Council has used packaged film or lecture and discussion programs to reach the older adult audiences. These programs address a wide variety of disciplines such as social history, folklore, constitutional history, and art history.

NORTH CAROLINA

The North Carolina Humanities Council funded a project that will combine the efforts of the North Carolina Center for Creative Retirement, the Appalachian Region of the National Historical Society, and public libraries in both North and South Carolina to offer scholar-led reading and discussion programs on the social, cultural, and economic impact of railroads. Six, 8-week-long reading and discussion groups are planned for each State.

NEW JERSEY

The New Jersey Committee for the Humanities funded a series of programs bringing together intergenerational audiences of senior citizens and high school students to discuss a wide range of topics. Cultural, ethnic, and societal values and issues are explored through discussion of related works in literature and history.

SOUTH DAKOTA

The South Dakota Humanities Council funded a seminar on ethics in health and aging. History, literature, and sociology scholars explored a wide range of topics including: national, State, and local policies on aging-related issues; aging seen through literature; and cultural and social influences on health.

WISCONSIN

The Wisconsin Humanities Committee funded a program offering three 6-week humanities courses designed for older adults. The courses are "Modern American Short Stories," "The Great Depression: American Writers of the 1920's," and "From the Great Wall to Tiananmen Square".

-----FUNDED PROJECTS-----

PAGE: 1

FE-24199-90	Grantee:INDIVIDUAL	**APPROVED DATE:	11/89
Mr. Martin S. Lindauer		**START DATE	12/01/89
(SUNY Res. Fdn./College at Brockport)		**END DATE	11/30/91
Bowling Green, OH 43403		**APPROVED OR	750.00
CONG.DISTRICT: 05		**FUNDED OR	750.00
		**OBLIGATED	750.00

TITLE: Autobiographical Reports of Aged Artists on Creativity

FT-33667-90	Grantee:INDIVIDUAL	**APPROVED DATE:	02/90
Mr. Edwin L. Amenta		**START DATE	05/01/90
(New York University)		**END DATE	09/30/90
New York, NY 10003		**APPROVED OR	3,500.00
CONG.DISTRICT: 17		**FUNDED OR	3,500.00
		**OBLIGATED	3,500.00

TITLE: The Townsend Movement and American Old-Age Spending Policies

GL-20995-90	Grantee:INST/ORGANIZ	**APPROVED DATE:	02/90
Ms. Sylvia R. Liroff		**START DATE	06/01/90
National Council on the Aging, Inc.		**END DATE	03/31/91
Washington, DC 20024		**APPROVED OR	147,545.00
CONG.DISTRICT: 86 AT LARGE		**FUNDED OR	147,545.00
		**OBLIGATED	147,545.00

TITLE: Silver Editions II: Advancing the Concept of Library-Centered Humanities Programs for Older Adults

PROJECT DESCRIPTIONS:

To support reading and discussion programs for older adults, workshops for scholars, a programmer's manual, and related material.

SP-21594-90	Grantee:INST/ORGANIZ	**APPROVED DATE:	02/90
Mr. James W. Walters		**START DATE	03/01/90
Loma Linda University		**END DATE	06/30/92
Loma Linda, CA 92350		**APPROVED OR	171,290.00
CONG.DISTRICT: 37		**FUNDED OR	171,290.00
		**OBLIGATED	171,290.00

TITLE: Ethics and Aging Project: A Public Discussion Regarding
the Humanities and Health Care

PROJECT DESCRIPTIONS:

To support a conference, a lecture series, a series of community forums, media programs, and publications that will examine ethics and health care for the aged.

GP-21599-90	Grantee:INST/ORGANIZ	**APPROVED DATE:	02/90
Ms. Sylvia R. Liroff		**START DATE	05/01/90
National Council on the Aging, Inc.		**END DATE	05/31/91
Washington, DC 20024		**APPROVED OR	145,000.00
CONG.DISTRICT: 88 AT LARGE		**FUNDED OR	145,000.00
		**OBLIGATED	145,000.00

TITLE: Roll On, River: Rivers in the Lives of the American People

PROJECT DESCRIPTIONS:

To support the development of scholar-led reading and discussion programs on the role of rivers in American life.

ITEM 25. NATIONAL SCIENCE FOUNDATION

OCTOBER 12, 1990.

DEAR MR. CHAIRMAN: Your letter of September 24, 1990 to the Acting Director of the National Science Foundation (NSF) was referred to me since this Directorate provides most of NSF's support for research on aging.

It is a pleasure to report on the activities of NSF related to aging and the concerns of the elderly. As stated in the enclosed report, the Foundation does not have any programs directed specifically toward issues related to aging. However, basic and applied research projects having both direct and indirect bearing on this important area of national concern are supported through the Foundation's regular research grant programs. Most such projects have been supported through the Division of Biological and Critical Systems in NSF's Directorate for Engineering, and through the Divisions of Behavioral and Neural Sciences, and Social and Economic Science in the Directorate for Biological, Behavioral and Social Sciences.

If you would like additional information, please do not hesitate to call on me.

Sincerely,

MARY E. CLUTTER,
Assistant Director.

Enclosure.

NATIONAL SCIENCE FOUNDATION—REPORT FOR DEVELOPMENTS IN AGING

The National Science Foundation, an independent agency of the Executive Branch, was established in 1950 to promote scientific progress in the United States. The Foundation fulfills this responsibility primarily by supporting basic and applied scientific research in the mathematical, physical, environmental, biological, social, behavioral, and engineering sciences, and by encouraging and supporting improvements in science and engineering education. The Foundation does not support projects in clinical medicine, the arts and humanities, business areas, or social work. The National Science Foundation does not conduct laboratory research or carry out education projects itself; rather, it provides support or assistance to grantees, typically associated with colleges and universities, who are the primary performers of the research.

The National Science Foundation is organized generally along disciplinary lines. None of its programs has a principal focus on aging-related research; although, a substantial amount of research bearing various degrees of relationship to aging and the concerns of the elderly is supported across the broad spectrum of the Foundation's research programs. Virtually all of this work falls within the purviews of the Directorate for Biological, Behavioral, and Social Sciences and the Directorate for Engineering.

DIRECTORATE FOR BIOLOGICAL, BEHAVIORAL, AND SOCIAL SCIENCES

The research projects supported by this directorate are designed to strengthen scientific understanding of biological and social phenomena. Research is supported across a spectrum ranging from the fundamental molecules of living organisms to the complex interaction of human beings and societal organizations. These projects are supported by six research divisions incorporating 26 research programs.

The Division of Behavioral and Neural Sciences supports research which is aimed at understanding the behavior of human beings and animals. To achieve this end, it uses molecular, developmental, and cultural approaches while concentrating on model systems, behaving organisms, and cultures. Aging of the brain is known to involve the loss of neurons, changes in neuronal growth factors and neurotransmitter systems and alterations in the shape of neurons and synapses. Currently supported research is addressing maintenance and regeneration of neurons, regulation of neurotransmitter systems, learning and memory in aged animals, and the effect of aging on brain proteins and microtubules.

Anthropological research is being supported to study how economic and social change has affected traditional family behaviors associated with caring for dependent elderly in developing countries.

Other research on the aging process in plants and animals is supported by the Division of Biotic Systems and Resources.

The Division of Social and Economic Science focuses primarily on expanding fundamental knowledge of how social and economic systems work. Attention is centered on organizations and institutions, and how they function and change, and how human interaction and decisionmaking take place. The Division supports the collection of large sets of data, such as national surveys, that are used by many investiga-

tors, as well as the research projects of individual scientists. Most of the work supported by this division has indirect, rather than direct, relevance to aging and the concerns of the elderly. For example, the Panel Study of Income Dynamics provides information on changing household composition, labor force participation, income, assets, and consumption patterns as individual respondents grow older. The General Social Survey contains several attitudinal questions relevant to older persons, such as the optimal age of retirement and government's role in the care of the elderly. This survey also permits the assessment—by age and by cohort—of shifts over time in opinions generally. The final survey supported by this division is the National Election Survey, which provides information on attitudes regarding candidates and issues held by different age groups in the population at large. An additional project funded by the division during the past year is focused on the employment and earnings of older Americans.

DIRECTORATE FOR ENGINEERING

The National Science Foundation's Directorate for Engineering seeks to strengthen engineering research in the United States and, as appropriate, focuses some of that research on areas relevant to national goals. This is done by supporting projects across the entire range of engineering disciplines and by identifying and supporting special areas where results are expected to have timely and topical applications.

Most aging-related research supported by this directorate is through its Bioengineering and Aiding the Disabled Program, in the Division of Biological and Critical Systems. Most of this work is indirectly related to issues of aging and the elderly—its relevance derives from the increased propensity for the elderly to develop physical disabilities. Examples of projects currently funded by this program include studies of a new concept for regulating the biodegradation of absorbable synthetic polymers and fibers, failure detection of orthopaedic implants using neuronal nets and vibrational analysis, implantable sensors for measuring tendon-muscle forces, biomechanical foundations of tissue engineering of arteries and veins, a dynamic implant for the development of a cementless prosthesis, a silicon-based microsystem for stimulation of the visual cortex to restore some visual perception to the blind, and the bone-prosthesis interface by vibrational spectroscopy. While not specifically directed toward problems of aging, these studies have potential for dealing with conditions prevalent in old age.

ITEM 26. OFFICE OF CONSUMER AFFAIRS

DECEMBER 3, 1990.

DEAR SENATOR PRYOR: In response to your request, I have enclosed the "Report of Activities of the U.S. Office of Consumer Affairs During 1990 Relating to Older Americans."

My office is pleased to have the opportunity to contribute to the Committee's Annual Report on Aging. If you have questions, please have your staff call Juanita Yates, OCA's Associate Director for Special Concerns, at 634-4297.

Sincerely,

ANDREW L. POAT,
Acting Director.

Enclosure.

REPORT OF ACTIVITIES OF THE UNITED STATES OFFICE OF CONSUMER AFFAIRS DURING 1990 RELATING TO OLDER AMERICANS

The Director of the U.S. Office of Consumer Affairs (OCA) has also served as Special Adviser to the President for Consumer Affairs and Chairperson of the Consumer Affairs Council, established by Executive Order 12160. OCA provides the staff and administrative support to carry out these responsibilities. Dr. Bonnie Guiton directed OCA until September 14 when she resigned to become President and Chief Executive Officer of Earth Conservation Corp. OCA's Deputy Director, Andrew L. Poat, was appointed Acting Director.

OCA encourages and assists in the development and implementation of programs dealing with consumer issues and concerns; advises agencies with business and industry officials by encouraging the development of voluntary employment, consumer protection, and information programs; serves as the focal point for the coordination and standardization of Federal complaint handling efforts; works to improve and coordinate consumers education at the local, State, and Federal levels; and cooperates with States and local government agencies, and voluntary consumers and

community organizations in the delivery of consumer services and information materials.

The major activities focus on voluntary mechanisms, marketplace innovations, consumer education and information, and conferences exchange information and develop dialogs. OCA's activities also focus on helping State and local government units and consumer and community groups to deal with issues affecting consumers.

Highlighted below are major activities having the greatest impact on older Americans.

CONSUMER ISSUES

PRIVACY

In cooperation with the National Consumers League, OCA sponsored a National Consumer Conference to examine privacy concerns on June 21-22 in Washington. More than 200 participants discussed the ethics of collection and dissemination of personal information; the pros and cons of regulation and self-regulation; and the current state of privacy rights in today's technologically advanced environment.

OCA was successful in encouraging the Department of Health and Human Services to establish a Task Force to review privacy issues in health care. OCA also produced a brochure which outlines simple steps consumers can take to protect themselves against the invasion of privacy. OCA participated in an Equifax study concluded that older persons were the strongest privacy-oriented group on issues related to Caller I.D. and collecting names and addresses for mailing lists.

On August 1, Dr. Guiton presented testimony before the Senate Judiciary Committee's Subcommittee on Technology and the Law. On September 19, Mr. Poat presented testimony before the House Judiciary Committee's Subcommittee on Courts, Intellectual Property and the Administration of Justice. The testimony expressed support for Bills which would allow Caller identification as long as telephone companies provide a blocking mechanism for consumers who wish to keep their phone numbers private. Caller I.D. is a new technology which displays the caller's phone number to the recipient of the call. Automatic display of the number would provide protection to the elderly who might feel particularly vulnerable to threatening or harassing calls. Additionally, the elderly are vulnerable to calls from telemarketers. This might give them a tool to track down con artists.

CREDIT

On June 12, Dr. Guiton presented testimony before the House Committee on Banking, Finance and Urban Affairs' Subcommittee on Consumer Affairs and Coinage on revisions to the Fair Credit Reporting Act. The testimony addressed concern for consumer privacy; the need to assure the accuracy of credit records; operational fairness to consumers both in the time and energy required to correct records and in the length of time accurate and inaccurate negative information is reported; and the need to educate consumers generally about the credit granting system. Many individuals, including the elderly who are often slow to understand and use high tech information technologies, do not understand new innovations by credit bureaus. OCA testified in favor of increased consumer education and increased consumer control over how records are to be used.

OUTREACH

MEETINGS AND CONFERENCES

The OCA Director and staff met with program staff from the American Association of Retired Persons and other aging constituency organizations to underscore the Administration's concern for the elderly and seek their support and views on policies which impact on the elderly.

OCA's Associate Director for Special Concerns conducted a workshop on "Consumer Concerns of the Minority Elderly" at the Association for Gerontology and Human Development Annual Conference. The conference was held February 8-10 in New Orleans. Copies of our *Consumer's Resource Handbook* were distributed to the attendees which included faculty and staff from Historically Black Colleges and Universities.

OCA cooperated with the Direct Marketing Association in sponsoring Consumer Industry Dialogues on April 10 in Denver and September 10 in Seattle. Older individuals, who may be ill or have limited mobility are particularly vulnerable to direct marketing solicitations and are most often the victims of fraud. Direct marketing of products is among the most common consumer complaints. These forums

bring together industry experts in catalog, publishing and telemarketing companies with consumer and government consumer leaders.

OCA distributed copies of our *Consumer's Resource Handbook* to the 2,300 attendees at the National Council on the Aging Conference. The conference was held April 25-28, in Washington, D.C.

In recognition of Older Americans Month, OCA's Associate Director for Special Concerns coordinated and presided at a special May 16 seminar on "Eldercare." The seminar was cosponsored by OCA, the National Council on Aging, National Energy and Aging Consortium and the Society of Consumer Affairs Professionals in Business (SOCAP). The seminar was designed to raise the consciousness and increase the sensitivity of consumer affairs professionals to the needs, concerns, and abilities of our elderly and disabled citizens. The Associate Director chairs SOCAP's Committee on Liaison with the Elderly and Disabled.

In June, OCA's Associate Director for Special Concerns served on the Administration on Aging's review panel of grant applications submitted under Title IV of the Older American Act.

OCA's Associate Director for Special Concerns participated in the American Association of Retired Persons' Biennial Convention which was held June 12-14 in Orlando, FL. Speakers included David Horowitz, Ralph Nader, Jane Bryant Quinn, Louis Rukeyser, and Andrew Tobias, who discussed issues of importance to elderly consumers.

OCA's Associate Director for Special Concerns conducted a consumer education workshop and presided at a general session with consumer leaders at the National Conference on Adults with Special Learning Needs. More than 300 educators, government and consumer leaders attended the conference which was held August 14-18 in Grenelefe, FL. Workshops and seminars addressed the importance of lifelong learning. OCA's *Consumer's Resource Handbook* was distributed to the attendees.

OCA's Associate Director for Special Concerns participated in the Society of Consumer Affairs Professionals in Business Conference September 22-26 in New York City. Issues related to improving the marketplace for minority and elderly consumers were addressed. A special report was released at the meeting which discussed the importance of cultural diversity in addressing consumer concerns and problems. The Associate Director was a member of the Task Force which developed the report.

As part of the National Energy Awareness Month celebration, OCA's Associate Director for Special Concerns coordinated a special luncheon seminar sponsored by the National Energy and Aging Consortium. The seminar was held October 4 and highlighted a newly developed computer program capable of projecting information about the health, financial status, and number of older Americans in a given community through the year 2050. The seminar was the only national activity which focused attention on the elderly.

OCA distributed consumer education materials to the participants attending special seminar sponsored by the National Council on the Aging. The seminar on "Consumer Fraud and the Elderly" was held December 6 and featured Jim Thompson from AARP and Barbara Gregg from the Montgomery County Office of Consumer Affairs.

OCA's Associate Director for Special Concerns is working with the Electronic Industries Foundation in planning a National Conference on Consumer Product Design which will be held in April 1991 in Chicago. The conference is designed to provide information to marketers and designers about the Americans With Disability Act and to encourage them to design products that can be used by persons with functional limitations, rather than retrofitting or trying to adopt an existing design to meet their needs. Universal product design would benefit all consumers, abled, disabled, or functionally impaired.

OCA has begun a health care communications project designed to improve communications regarding the billing practices of hospitals and insurance companies. Project participants include the American Association of Retired Persons, National Consumers League, American Hospital Association, and National Society of Patient Representation and Consumer Affairs.

QUALITY SERVICE SUMMIT

OCA cooperated with John Hancock Financial Services and AT&T in convening the First International Quality Service Summit in Boston on November 18 and 19. More than 100 top leaders of service companies examined American attitudes toward service and discussed how the service sector could deliver quality service and help boost the American economy in the next decade. Roger Porter, President Bush's Assistant for Economic and Domestic Policy, told the participants that qual-

ity service is measured not by how much we invest in quality, but by how well we meet customer expectations.

Effective customer service is especially important for elderly consumers. Customer service representatives need to understand physical changes such as diminished eyesight or limited hearing ability and how to treat elderly customers with dignity and respect. A Blueprint, detailing key strategies managers can use to improve the quality of their customer service, will be published and disseminated to conference participants.

INFORMATION AND EDUCATION

PUBLICATIONS

In February, OCA sent our *Consumer's Resource Handbook* to senior editors throughout the country. The *Handbook* contains a section on aging and refers to other sections in the *Handbook* of interest to the elderly, such as health care, Social Security, and veterans affairs. The State and local directory section lists government offices responsible for coordinating services for the elderly. The *Handbook* also provides consumer information on a number of issues of interest to older consumers, including health fraud, telephone solicitations, warranties, contracts, mail order, and action certificates. In addition to the listing of Federal TDD numbers, the *Handbook* also includes TDD numbers of state and local government and corporate listings. The *Handbook* was distributed to aging organizations and State and area agencies on aging.

OCA reprinted the *Special Report on Cold Stress and Heat Stress* which offers useful information on how to identify the causes and symptoms of these weather-related conditions that often threaten the lives of the elderly. Single copies of the *Report* are distributed free from the Consumer Information Center in Pueblo, CO. OCA has also provided bulk copies of the *Report* to aging organizations to be used at conferences, workshops and seminars.

OCA sent *Consumer News* to senior publishers each month. Many of the articles provided information about Administration activities of particular interest to older consumers. They included:

- An announcement of the release of the Department of Health and Human Services' report on the quality of nursing homes.
- An announcement of the Food and Drug Administration's ban on nonprescription drugs for an enlarged prostate.
- A discussion about the use of Medicare to help pay for a pap smear.
- A discussion about the Department of Transportation's proposals to make airlines and buses accessible to disabled persons.
- A discussion about the Food and Drug Administration's approval of Anistreplase, and intravenous blood clot dissolving drug for preventing heart damage following a heart attack.
- An announcement of the Department of Health and Human Services' proposal on "look-alike" mailings.

OCA sent a *Eubie Smart* column on food labels and sodium and another on alternative operator systems, to 5,000 weekly newspapers throughout the country.

The OCA Director did numerous interviews on subjects affecting the elderly, especially the privacy and accuracy of credit records, on such programs as CNBC's "Smart Money" and "McLaughlin," and CNN's "Money Talk," as well as numerous local radio stations and newspapers.

Following the signing of the Americans With Disability Act by President Bush, OCA prepared and disseminated a press release discussing how disabled consumers will benefit as the new law is implemented. As individuals live longer lives, many of them may become disabled. The removal of barriers is certain to allow them greater access to the marketplace.

OCA is working on a project to improve the distribution of information about product safety recalls. The OCA Director has done interviews with local news services to call attention to the low consumer response rate to safety recalls.

EDUCATION

OCA joined with the Consumer Federation of America, the Educational Testing Service and national leaders in business, government, and academia in a TRW, Inc.—funded national survey of consumer competency. The results of the survey were released on September 24. Older individuals scored low on consumer information regarding food purchases and drugs. When average scores were broken down by age, persons age 60 and over scored lower than all age groups except those 29 and

under. OCA will convene follow up discussions in 1991 to interpret the study results and determine what specific action should be taken to remedy the most severe deficiencies discovered by the study.

OCA has worked in partnership with the American Association of Community and Junior Colleges and the J.C. Penney Company which has awarded the following minigrants for programs directed to elderly consumers.

In partnership with local business and educational organizations, Kalamazoo Valley Community College, Michigan, has established a model for linking providers of consumer education with elderly consumers who need it. For example: In partnership with Shearson Lehman-Hutton, the college conducted three seminars, attended by about 100 consumers, in the areas of financial and retirement planning; used local attorneys to conduct estate planning sessions; and worked with a community center director to counsel elderly participants who need financial and consumer assistance. Program results show that the elderly are less confused and intimidated in dealing with sales promotions of policies to supplement medicare. A video advising a 24-hour wait before making such purchase decisions kept several participants from paying for unneeded coverage. The elderly will also benefit from two Train-the-Trainer sessions on credit issues conducted for staff members of human service organizations whose client populations number approximately 10,000.

The "Consumer Education Outreach for Rural Elderly" in Weed, CA, has succeeded in launching its program for consumers in this small, rural, and economically depressed lumber community. Elderly consumers constitute half of the adult population living below poverty (16 percent). A third are Italian and Black Americans with low English skills and/or education levels, factors impeding ability to learn and use information. Low income and health problems create barriers to use of transportation to obtain information and services. The enrollment goal to increase class size by 25 percent was greatly exceeded by a doubling of enrollment. Also increased was the availability of consumer learning resources and the level and range of participant expertise. Field trips resulted in increased student awareness of consumer resources and comparison shopping.

In Jacksonville, FL, the Florida Community College and the Consumer Affairs Office are nearing completion of a 10-minute video entitled, "Wise Cents," which features crimes against the elderly and offers advice on spending practices. In vignettes, "Penny Wise," an owl standup character, advises the elderly about exploitation in areas of telephone solicitation, home improvement, and auto repairs. These top fraud areas were identified in a survey of 115 senior citizens at two Jacksonville community centers, and through information from local, State, and Federal consumer sources. The college has scheduled a premier showing in February 1991 involving the mayor, Governor, and State attorney. The target population for video outreach is 130,000 elderly in the Jacksonville metropolitan area through home television viewing and participation in community and nutrition centers. It will also be available nationwide through similar program outlets.

NATIONAL CONSUMERS WEEK

OCA coordinated National Consumers Week (NCW) which was held April 23-27. Many of the events addressed issues of interest to the elderly. For example:

The OCA Director gave opening remarks at the American Association of Retired Persons' Consumer Action Awards Ceremony which honored Max Weiner of Philadelphia. Mr. Weiner's widow, Besse accepted the award.

Heritage High School of Broadlands, IL, created a handbook for the seniors in the community. *The Senior Citizen's Guide to Champaign County* is a small informational pamphlet designed to provide useful information.

Central Hudson Gas and Electric Corporation of Poughkeepsie, NY, inserted an article in the *Senior Times Newsletter* recognizing its "Customer Group" in its 10th year of service.

WHITE HOUSE CONFERENCE

As part of the National Consumers Week celebration, OCA convened a National Symposium on Minority Consumer Issues which was held April 24 at the White House. More than 100 leaders of elderly, minority, educational, consumer, and religious organizations participated in the first Federal meeting which focused specifically on minority consumer issues. The Symposium was designed to identify government and private sector resources; provide current information on consumer legislation and regulations; provide consumer education publications and other materials; and encourage citizen participation in rulemaking which impacts on consumers.

Representatives from the National Center and Caucus on the Black Aged, American Association of Retired Persons, and National Hispanic Council on Aging participated in discussions on health, product safety, credit, fraud, and a number of other issues which are important to elderly consumers. OCA is reviewing plans for a follow up meeting in 1991.

INTRAGOVERNMENTAL ACTIVITIES

INTERNATIONAL

In April and in October, Mr. Poat headed U.S. Delegation to the Organization for Economic Cooperation and Development's (OECD) Committee on Consumer Policy Meetings in Paris. The Committee is composed of representatives from the 24-member countries. In 1990, the Committee analyzed reports on the impact of deregulation of financial services and agricultural policies on consumers. The Committee also reviewed and discussed a special survey on product liability systems. All issues addressed by the OECD are reviewed from a broad perspective and the concerns of the elderly are always reflected in final reports.

Throughout the year, the OCA Director and staff met with government and consumer delegations from other countries. Issues of concern to elderly consumers were often addressed at these meetings.

COMMITTEES

OCA was represented on the following committees which have a special impact on the elderly:

The National Energy and Aging Consortium is a network of 50 government, aging, and private sector organizations which have joined together to help the elderly cope with rising energy costs.

The Information and Referral Consortium on Aging is a network of government, aging, and private sector organizations which provide information about and develop programs which strengthen information and referral systems throughout the country.

The Alliance Against Fraud in Telemarketing is a network of government agencies, consumer organizations, telecommunication companies, and marketing trade associations which provide consumer information on telemarketing fraud. The elderly are particularly vulnerable to telemarketing fraud. This is reflected in many of the written inquiries and complaints that OCA receives each year from older Americans.

The National Association of Consumer Agency Administrators' Health Products and Promotions Information Network which provides information regarding complaints about fraudulent or misleading health products or marketing tactics. The elderly consumer is especially vulnerable to these tactics.

EXECUTIVE ORDER

The OCA Director is designated by the President to be the Chairperson of the Consumer Affairs Council, established by Executive Order 12160. Executive Order 12160—the Consumer's Executive Order—is a directive to Federal agencies to institute consumer programs which are effective and responsive to the needs of consumers. This action is a logical progression from the Consumer Representation Plans of the 17 Executive Branch departments and agencies developed in 1976.

The Order addressed the problems of citizens in achieving adequate participation in government decisionmaking processes. For example, agencies are required to develop information materials to inform consumers about their procedures for constituent group which should be reached with information. Under the Order, agencies must ensure that groups such as the elderly are being reached.

ITEM 27. PENSION BENEFIT GUARANTY CORPORATION

JANUARY 2, 1991.

DEAR SENATOR PRYOR: I am pleased to submit information on the Pension Benefit Guaranty Corporation (PBGC), as you requested, for Volume II of The Senate Special Committee on Aging annual report, *Developments in Aging*. Our report described PBGC's activities on behalf of older Americans during 1990.

Questions from Committee staff about the report should be directed to Joel Greenblatt at (202) 778-8840.

I look forward to working with you and the Committee in the coming year on matters of mutual concern.

Sincerely,

JAMES B. LOCKHART.

Enclosure.

PENSION BENEFIT GUARANTY CORPORATION

The Pension Benefit Guaranty Corporation (PBGC) insures the pensions of nearly 40 million Americans in about 95,000 private defined benefit pension plans. These pension plans provide a specified monthly benefit at retirement based on salary and years of work.

The Employee Retirement Income Security Act of 1974 (ERISA) established PBGC as a Federal corporation and set forth the mission:

Encourage the growth of private pension plans;

Pay timely and uninterrupted pension benefits; and

Maintain pension insurance premiums at the lowest level necessary to carry out the agency's obligations.

PBGC receives no funds from Federal tax revenues. Operations are financed by insurance premiums paid by sponsors of defined benefit plans, investment income, assets from pension plans trustee by PBGC, and recoveries from the companies formerly responsible for the trustee plans. PBGC administers two insurance programs separately covering single-employer and multiemployer pension plans.

CREATING A SOUND INSURANCE PROGRAM

During 1990, the PBGC achieved significant victories in court and worked toward success at the negotiating table in efforts to prevent loss to retirees and the insurance program. Events at year's end showed that PBGC's insurance funds continued to be vulnerable to major losses that represent large hidden liabilities to the Federal Government. The PBGC intensified its efforts to expose these liabilities and contain them.

Private defined benefit pensions insured by PBGC continue to be well-funded with about \$800 billion in liabilities backed by more than \$1 trillion in assets. However, PBGC still faces substantial risks from underfunded plans. About \$20 billion to \$30 billion of underfunding exists in pension plans concentrated in the steel, airline, and automobile industries.

Plans with about \$8 billion of this underfunding are sponsored by financially troubled companies and represented a serious risk of loss to PBGC. These plans threaten not only PBGC but also the retirement security of participants whose unfunded pensions may include nonguaranteed benefits.

PBGC's long-term goal is to operate a service-oriented, professionally managed insurance company capable of achieving a stand-alone AAA rating to serve as the safety net for a healthy, growing defined benefit system. The key obstacle to obtaining that goal is the risk of large future losses from underfunded pension plans. In 1990, PBGC placed new emphasis on incentives for employers to fund rather than terminate pension plans.

BENEFIT PAYMENTS

When PBGC becomes trustee of a terminated plan, PBGC becomes responsible for paying the pension benefits due the plan's participants. PBGC now is responsible for paying guaranteed benefits to about 205,000 participants in over 1,560 terminated pension plans, including about 112,550 retirees presently receiving benefits from PBGC. Benefit payments during 1990 totalled about \$372 million, \$16 million more than in 1989. About 88,000 other participants are in pension plans with a high probability of termination. In addition, seven Eastern Air Lines pension plans trustee by PBGC in October 1990 cover another 50,000 participants.

PBGC is placing special emphasis on upgrading participant services, including calculating benefits more quickly, informing participants about their benefits and making payments accurately and on time. In recent years, PBGC has instituted electronic direct-deposit of benefit payments, simplified and clarified correspondence with participants, and reorganized annuity operations to accelerate benefit determinations and improve overall service.

FINANCIAL GUARANTEE OPERATION

While the agency has sufficient revenues and cash-flow to pay benefits currently due, PBGC's long-term obligations show a deficit of about \$1.9 billion for the single-

employer insurance program. Liabilities of approximately \$5 billion exceed assets of \$3.1 billion. The weakened condition of several employers with large underfunded pension plans and the restructuring of the airline industry led to increased losses for PBGC.

The Congress enacted an increase in the premium for single-employer plans as part of the budget agreement for fiscal year 1991. As a result, the premium will increase in 1991 from \$16 to \$19 per participant with an additional variable rate charge for underfunded plans that increased from \$6 to \$9 per \$1,000 of unfunded vested benefits. The variable rate, which provides an incentive for funding plans, is capped at \$53 per participant for a maximum premium of \$72 per participant. While this increase will improve PBGC's revenues, it alone may not be sufficient to reduce PBGC's deficit, which may still grow. The agency is considering other legislative changes for 1991 to strengthen employer's financial incentives to fund pension plans, to further reduce PBGC's exposure to losses, and to improve recoveries from firms that terminate plans.

The Corporation has established three mutually reinforcing strategies to prevent losses:

- Encourage better funding of pension plans,
- Discourage the termination of underfunded plans, and
- Maximize recoveries when an underfunded plan must be terminated.

Better Pension Funding.—During 1990, PBGC used the enforcement tools provided by the Congress to encourage employers to better fund pension plans. Joint-and-several liability of a controlled group (an employer and its affiliated companies) for funding a plan, and PBGC authority to obtain a lien against the assets of an employer and its controlled group for missed contributions, are proving very persuasive. These tools have resulted, in some instances, in negotiated increases in pension contributions. For example, negotiations involving Sharon Steel Corporation resulted in significant new pension funding as the company neared completion of a reorganization in bankruptcy.

PBGC also developed and used other means to raise public awareness of underfunding and encourage better pension funding. In 1990, PBGC released, for the first time, a list of the 50 companies with the largest underfunded pension plans. The list focused attention on underfunding and prompted companies to review their efforts to achieve full funding. Better funding of pensions can help prevent the losses that have hindered the pension insurance program in the past decade and the losses of nonguaranteed benefits that have hurt workers and retirees.

Discouraging Terminations.—Stiffer tests for termination of underfunded plans, enacted in recent years, are helping to sharply limit instances in which PBGC must step in to take over a plan. In general, PBGC will accept terminations of underfunded plans only when necessary to prevent the complete liquidation of the sponsoring employer or the failure of a plan to pay benefits when due.

PBGC has been able to discourage terminations through aggressive enforcement and tough negotiation emphasizing the agency's claims in bankruptcy and the joint-and-several liability of all controlled group members for plan underfunding.

PBGC also has taken forceful legal action when necessary to protect the program from an unwarranted termination or abuse of its guarantees. In the most important case in PBGC's history, the Supreme Court resolved PBGC's 3-year legal battle with The LTV Corporation over responsibility for three large underfunded pension plans. In upholding PBGC's broad authority to protect the Federal pension insurance program from abusive follow-on plans in the LTV case, the Supreme Court gave an important victory to all workers and retirees and to the companies that pay PBGC's premiums.

Maximizing Recoveries.—PBGC relies on negotiations and litigation to assure the best possible recovery on the agency's claims when the agency must assume trusteeship of an underfunded plan. The agency's recovery strategy, however, has been threatened by the U.S. Bankruptcy Court for the Southern District of New York, which in LTV proceedings has recommended that a district court hold that PBGC has no priority standing among creditors. If allowed to stand, the court's ruling could severely reduce PBGC's recoveries in bankruptcy cases and increase losses. PBGC is vigorously challenging the court's recommendations in district court.

STANDARD TERMINATION

Most of the plan terminations processed by PBGC each year are for fully funded plans that employers are terminating for business reasons or to substitute another plan. Once an employer establishes a defined benefit plan, Federal pension law—ERISA—restricts the employer's ability to terminate the plan. The employer must satisfy specific legal requirements for notices to participants and PBGC and for pay-

ment of all benefits earned by participants. PBGC is authorized to disallow any such "standard" termination that does not comply with these requirements. In 1990, PBGC received 11,453 notices of standard terminations, approximately the same as in the previous year.

Reversions.—Plan terminations resulting in large reversions of surplus assets to employers continued to decline from their peak in 1985. Projected for the year, total reversions amounted to about \$300 million in 1990 as compared to \$6.1 billion in 1985. Less than 100 plans terminated with reversions in excess of \$1 million as compared to about 170 the previous year and 582 at the 1985 peak. These large reversion cases remained a small proportion of all standard terminations, involving less than 3 percent of the nearly 60,000 plans terminated from 1985 through 1990.

PBGC analyzed whether employers terminated defined benefit plans because of leveraged buyout (LBO) transactions changing previously publicly traded corporations to private entities. The study concluded that the likelihood that a firm undertook an LBO was independent of the existence of excess pension assets. Two-thirds of the LBO's in the study took no reversions during the period 1980 to 1988. Of the one-third that did, the excess funds averaged less than 5 percent of the value of the firm.

Guarantee of Annuity Contracts.—During the year, some insurers that had issued annuity contracts for terminated plans faced losses because of investment in noninvestment grade bonds. Although no insurer failed to pay annuity contracts, this led to concern about the safety of pensions provided through the annuity contracts of these insurers.

ERISA does not require or authorize PBGC to guarantee these annuity contracts issued by private insurers. The law authorizes PBGC to pay benefits only when a plan terminates without enough assets to pay PBGC-guaranteed benefits. PBGC receives no premiums for participants whose benefits have been distributed through the purchase of annuity contracts, which are estimated to provide \$50 billion worth of pension benefits. Moreover, the Federal Government has no regulatory powers over insurance companies that issue annuity policies. Under ERISA, annuity insurer selections are fiduciary decisions subject to the fiduciary requirements enforced by the Pension and Welfare Benefits Administration (PWBA) of the Department of Labor.

Significantly, no annuity benefits have been lost in the 16 years of PBGC's existence due to insurance company default. Private insurers are regulated by the States, 47 of which have their own guarantee funds to protect annuity holders.

PBGC is concerned that retirees receive sound annuities and is taking steps to ensure this happens. PBGC requires that sponsors of terminating plans identify their selected annuity provider early in the termination process, rather than after distribution takes place. PBGC refers questionable choices to the Department of Labor for possible investigation. In addition, PWBA and PBGC are considering establishing standards for plan administrators to follow in selecting an insurer.

HEALTHY MULTIEMPLOYER PLAN INSURANCE

PBGC provides a separate insurance program for multiemployer defined benefit plans, which are collectively bargained plans involving more than one unrelated employer. In contrast to the program covering single-employer plans, PBGC's multiemployer insurance program has shown steady financial gains from 1980. Significant reforms enacted that year under the Multiemployer Pension Plan Amendments Act (MPPAA) changed the program's structure. The multiemployer program is now in sound financial condition.

The multiemployer program has a lesser scope than the single-employer program, covering about 8.4 million participants in about 2,300 plans. In addition, the event triggering PBGC'S guarantee and payment of benefits under this program is plan insolvency, not plan termination as under the single-employer program. If a multiemployer plan becomes financially unable to pay benefits currently due, PBGC will provide financial assistance in the form of a loan to enable the plan to pay guaranteed benefits.

The 1980 reforms to the multiemployer program require PBGC to conduct a study every 5 years to determine whether changes are needed in the program's premium rate or guarantee. PBGC completed the second study in 1990, confirming the program's financial health but also finding that inflation had devalued the existing guarantee limits. As a result, the agency is considering a recommendation that the current premium rate not be raised and the benefit guarantee be improved.

The multiemployer program, which is funded and maintained separately from the single-employer program, continued its gains in 1990. By the end of the year, the

multiemployer program had assets of \$191 million and liabilities totalling approximately \$48 million for future benefits and nonrecoverable financial assistance. Assets exceeded all liabilities by approximately \$133 million.

CONCLUSION

PBGC has made progress in strengthening the insurance program with the tools given by Congress. But in some instances, the tools need sharpening or reinforcement, and the Administration is considering further proposals for the Congress. PBGC is examining approaches to improve incentives for employers to better fund pension plans and to protect the insurance program. As PBGC continues to protect the pensions of workers and retirees, the agency also seeks to sustain employer confidence in defined benefit pensions, the only kind backed by a Federal insurance guarantee.

ITEM 28. POSTAL SERVICE

NOVEMBER 29, 1990.

DEAR MR. CHAIRMAN: This is in response to your September 24 letter to Postmaster General Anthony M. Frank, requesting information from the Postal Service on activities and programs which assist elderly Americans.

The enclosed document describes Postal Service programs which are designed to meet the mailing needs of older Americans and to prevent them from being victimized by mail fraud.

The Postal Service is pleased to contribute to this endeavor and will continue to develop programs to assist in improving the quality of life for the aging.

Sincerely,

WILLIAM T. JOHNSTONE.

Enclosure.

PROGRAMS AFFECTING OLDER AMERICANS

CARRIER ALERT PROGRAM

Carrier alert is a voluntary community service provided by city and rural delivery letter carriers who watch participants' mailboxes for mail accumulations that might signal illness or injury. Accumulations of mail are reported by carriers to their supervisors, who then notify a sponsoring agency, through locally developed procedures, for follow-up action. The program completed its eighth year of operation in 1990 and continues to provide a lifeline to thousands of elderly citizens who live alone.

DELIVERY SERVICE POLICY

The Postal Service has a long-standing policy of granting case-by-case exceptions to delivery regulations based on hardship or special need. This policy accommodates the special needs of elderly, handicapped, or infirm customers who are unable to obtain mail from a receptacle located some distance from their home. Information on hardship exceptions to delivery receptacles can be obtained from local postmasters.

FEDERAL ACCESSIBILITY STANDARDS

The Postal Service is subject to the Architectural Barriers Act of 1968 which requires that most Federal buildings leased or constructed after 1968 meet applicable standards. The Postal Service is also affected by the Rose Decision which requires any facility leased after January 1977 be handicapped accessible. To this end, the Postal Service completed the surveying last year of over 26,000 facilities which resulted in the initiation of 9,000 projects this year. The Postal Service has an aggressive Architectural Barriers Compliance Program and is committed to the intent of the law. The Postal Service values its elderly customers and feel they will benefit from our efforts, as well as those who are handicapped.

MAIL FRAUD AND MAIL THEFT INVESTIGATIONS

To many elderly Americans living alone and on fixed incomes, shopping by mail is a convenient way for them to obtain products and services. Unfortunately, they are also attractive targets for a few individuals who operate mail-order swindles. Through mail fraud and misrepresentation of products and services, unscrupulous

promoters not only cheat the public but also damage the reputation of the legitimate mail-order industry.

There are several types of fraudulent promotions which, by their nature, tend to focus on the elderly population. One of the most widespread is the work-at-home scheme. Senior citizens seeking to supplement their incomes may be enticed by advertisements promising enormous earnings while working from the convenience of home. The scheme begins with the promoter requiring an initial fee, typically from \$5 to \$25, before information about the plan is supplied. The fraud continues as a pyramid operation, whereby the consumer involves others in the scheme, resulting in funds being generated to the promoter and not the respondents.

Individuals approaching retirement or those already retired sometimes respond to what appear to be attractive land sales deals. The promise of a warmer climate, low down payment, and easy monthly installments appears enticing until the purchaser discovers that the parcel of land is located in a desert wasteland and cannot be resold for even a fraction of the price paid.

Another fraud perpetrated against elderly customers is the mail-order sale of worthless pills, nostrums, and devices which promise to rid the aged of needless suffering. Probably the cruelest of these frauds are those offer hope for cure of cancer, diabetes, and other major illnesses.

The ailments and afflictions that are a part of aging will leave the buyer looking for a magical cure to alleviate arthritic pain, restore lost vigor, and improve impaired sight or hearing. These pills and devices often have not been tested by medical authorities, are not capable of curing, and could even be injurious to one's health.

In an effort to heighten public awareness of mail fraud and other postal-related crimes, the Postal Inspection Service maintains across the country a cadre of Postal Inspectors trained as Crime Prevention Specialists. Working with Federal and State agencies and consumer groups, one of their missions is to educate and inform the public. Each year they appear on hundreds of television and radio interview programs and prepare articles for numerous newspapers and magazines. They give presentations at health fairs, community action groups, and national prevention conferences emphasizing the need for consumer awareness in fighting crime. They respond to special requests, often from senior citizens, regarding specific problem areas.

Over the past 7 years, the Postal Inspection Service has issued a series of public service announcements alerting the public to fraud schemes operating through the mails. In 1989, the Inspection Service contracted for the production of a Video News Release on fraudulent "Boiler Room" operations which often target the elderly. The release was distributed via satellite to over 600 stations across the country, and in many instances, was customized to parallel local consumer problems.

Since 1986, the Postal Inspection Service has participated in the National Health Care Anti-Fraud Association Seminars and has worked with this association to combat health care frauds, many of which victimize senior citizens. The Postal Inspection Service has participated in conventions sponsored by the National Council on Aging. At display booths, the Postal Inspection Service representatives highlight various types of fraud schemes which target the elderly.

Despite the existence of such preventive efforts, the number and variety of mail fraud schemes ensure that many people will continue to be victimized by mail fraud promotions. In dealing with this, the Postal Service uses a two-pronged attack. Criminal prosecution is possible under the Mail Fraud Statute, 18 U.S.C. Section 1341, which provides penalties of up to 5 years in prison and a \$1,000 fine for those who use or cause the mail to be used to further a fraudulent scheme. Second, and perhaps more important for the consumer, the Postal Service can take action under the False Representations Statute, 39 U.S.C. Section 3005. This statute permits the Postal Service, following a full due process hearing before an administrative law judge, to return to the sender all mail addressed to a promotion whose advertisement soliciting remittances by mail are proven to contain false representations. In addition, the Postal Service may request the U.S. District Court, in the area where the promotion receives its mail, to issue a temporary restraining order to stop the delivery of mail to that promotion until the administrative law judge renders a decision.

A crime which strikes the elderly population particularly hard is mail theft. Many poor and elderly Americans depend on the receipt of a monthly check in the mail as their sole income. These individuals suffer greatly when their checks do not arrive as scheduled. Each year the Postal Service delivers hundreds of millions of Federal, State, and local benefit checks. Although the number of stolen checks in relation to the number mailed is minute, the Postal Inspection Service considers

this a significant problem and recognizes the impact this crime has on the victim, particularly on elderly persons who are dependent upon the checks for subsistence. The Postal Service also delivers millions of personal and commercial checks and other valuable items such as savings bonds, money orders, credit cards, and food stamps, all of which are appealing targets for mail thieves.

Two slide presentations entitled "Protecting Your Mail" and "Fraud By Mail" have been developed and are being shown to the public by Crime Prevention Specialists. A Postal Service booklet, "A Consumer's Guide to Postal Crime Prevention," has been updated to include new information. It furnishes tips to consumers on how to avoid being victimized by fraudulent schemes and mail theft. This booklet also includes the addresses of Postal Inspection Service Divisions throughout the country.

A series of investigative programs to combat the problem of mail theft is also in place. Postal Inspectors cooperate with the U.S. Secret Service and local police investigating the forgery of checks believed to have been stolen from the mail. They also work with officials of check issuing agencies to improve procedures for the prompt charge-back of checks and referral of information whenever theft from the mail is suspected. The Postal Service has encouraged the development of better photo and signature identification cards and has enlisted the cooperation of public housing authorities to install and maintain more secure mail receptacles and mail rooms.

INJUNCTIONS AND OTHER CIVIL POWERS

In addition to the investigation of individuals or corporations for possible criminal violations, the Postal Inspection Service can protect consumers from material misrepresentations through the use of several statutes. In less severe cases, operators of questionable promotions agree to a Voluntary Discontinuance. This is an informal promise to discontinue the operation of the promotion. Should the agreement be violated, formal action against the promoter could be initiated. In certain cases where a more formal action is better suited, a Consent Agreement obtained. Generally, a promoter signs a Consent Agreement to discontinue the false representations or lottery charged in a complaint. If this agreement is violated, the Postal Service may withhold the promoter's mail pending additional administrative proceedings.

The Postal Service (Judicial Officer) is empowered under 39 U.S.C. 3005(b)(2) to issue a Cease and Desist (C&D) Order which requires any person conducting a scheme in violation of Section 3005 to immediately discontinue. C&D Orders are issued as part of a False Representation Order and, as a matter of course, are agreed to as part of a Consent Agreement. Violations of C&D Orders may be subject to civil penalties under 39 U.S.C. 3012. When more immediate relief to protect the consumer is warranted, the Postal Service has a number of effective enforcement options available. Title 39 U.S.C. 3003 and 3004 enables the Postal Service, upon determining that an individual is using a factitious, false, or assumed name, title, or address in conducting or assisting activity in violation of 18 U.S.C. Sections 1302 (Lottery), 1341 or 1342 (Mail Fraud), to withhold mail until proper identification is provided and the person's right to receive mail is established.

In those instances where a more permanent action is necessary, 39 U.S.C. 3007 allows the Postal Service to seek a Temporary Restraining Order detaining mail. By withholding service to the suspected violator, the extent of victimization is limited while an impartial judge reviews the facts and makes a final determination. If the judge decides that all mail pertaining to the promotion should be returned, then a False Representation Order, authorized under 39 U.S.C. 3005, is issued. In addition, U.S. District Judges may hold a hearing on alleged fraudulent activity, and issue a permanent injunction regarding the operation pursuant to 18 U.S.C. 1345.

By requesting the court to withhold mail while a case is argued, Postal Inspectors have been successful in many cases in limiting the extent of victimization. Action under these statutes does not preclude criminal charges against the same target.

NATIONAL CONSUMERS' WEEK/CONSUMERS' PROTECTION WEEK

The Postal Service has sponsored an annual Consumer Protection Week since 1977. Since 1980 the Postal Service's Consumers' Protection Week has been scheduled to coincide with National Consumers' Week. Promotion and publicity kits are prepared and distributed to warn consumers about mail fraud and misrepresentation of products and services sold by mail. Additional information about proper addressing of mail, packaging parcels correctly, temporary address changes, sending valuables through the mail, and how to report service problems are also beneficial to senior citizens and are included in the kit. As medical fraud and work-at-home

schemes have traditionally ranked at the top of fraudulent promotions, the focus of material distributed has frequently been directed toward alerting senior citizens of such schemes.

STAMPS BY MAIL

Stamps by Mail (SBM) is one of the Easy Stamp Services that allows postal customers in city delivery areas to purchase postal products such as booklets, sheets, coils, postal cards, stamped envelopes, and philatelic items by ordering through the mail.

The SBM program benefits a wide variety of people and is particularly beneficial to elderly or shut-in customers who cannot travel to the post office. SBM provides order forms incorporated in self-addressed postage-paid envelopes to its customers for their convenience in obtaining products and services without having to visit a Postal Service retail unit. The form is available in lobbies or from the customer's carrier. The customer fills out the order form and returns it to the carrier or drops it in a collection box. Orders are normally returned to the customer within two or three business days.

STAMPS BY PHONE

Stamps by Phone is a convenience program that is intended to target the business, professional, and household customers who are willing to pay a \$3 service charge for the convenience of ordering by phone and paying by credit card (VISA or MasterCard) to avoid trips to the post office. The customer calls the (1-800-STAMPS-24) toll-free number, 24 hours a day, 7 days a week, and orders from a menu of postal products. There is no minimum amount and customers will receive their order within 3 to 5 business days.

WINDOW AUTOMATION AT RETAIL FACILITIES

The Postal Service is installing automated systems called Integrated Retail Terminals at the service windows in retail facilities in all medium to large cities. These terminals use video screens to display information about each transaction for the customer. The screens show some mailing restrictions and required mailing forms, total amount due, and change from the amount tendered. The display of this type of information is useful to many customers with hearing impairments, including some older Americans.

ALTERNATE POSTAL RETAIL SITES

Alternate postal retail sites include Retail, or contract Postal Units, and stamp consignment outlets (grocery stores, etc). Providing alternative sites for routine postal retail transactions benefits both the Postal Service and our customers.

More convenient locations available for customers to purchase stamps, generally means less time for them to obtain these retail services. Purchasing stamps and postal money orders, registering a letter, and other postal errands, can be combined with a trip to the neighborhood shopping center. This is particularly advantageous to the elderly.

ITEM 29. RAILROAD RETIREMENT BOARD

DECEMBER 10, 1990.

DEAR MR. CHAIRMAN: In response to your letter of September 24, 1990, we are enclosing a report summarizing the U.S. Railroad Retirement Board's program activities for the elderly during fiscal year 1990.

We look forward to your committee's report, *Developments in Aging: 1990*.

Sincerely,

GLEN L. BOWER,
Chairman.

Enclosure.

U.S. RAILROAD RETIREMENT BOARD ANNUAL REPORT ON PROGRAM ACTIVITIES FOR THE ELDERLY

The U.S. Railroad Retirement Board is an independent agency in the executive branch of the Federal Government, administering comprehensive retirement-survivor and unemployment-sickness benefit programs for the Nation's railroad workers and their families under the Railroad Retirement and Railroad Unemployment In-

insurance Acts. The Board also has administrative responsibilities under the Social Security Act for certain benefit payments and railroad workers' Medicare coverage.

Under the Railroad Retirement Act, the Board pays retirement and disability annuities to railroad workers with at least 10 years of service. Annuities based on age are payable at age 62, or at age 60 for employees with 30 years' service. Disability annuities are payable before retirement age on the basis of total or occupational disability. Annuities are also payable by the Board to spouses and divorced spouses of retired workers and to widow(ers), divorced or remarried widow(ers), children, and parents of deceased railroad workers. Qualified railroad retirement beneficiaries are covered by Medicare in the same way as Social Security beneficiaries.

Under the Railroad Unemployment Insurance Act, the Board pays unemployment benefits to railroad workers who are unemployed but ready, willing, and able to work and pays sickness benefits to railroad workers who are unable to work because of illness or injury.

BENEFITS AND BENEFICIARIES

During fiscal year 1990, benefits paid under the Railroad Retirement and Railroad Unemployment Insurance Programs totaled almost \$7.3 billion. Retirement and survivor benefits amounted to \$72. billion, and unemployment and sickness benefits totaled \$95 million. The number of beneficiaries on the retirement-survivor rolls on September 30, 1990, totaled 889,000. The majority (83 percent) were age 65 or older.

At the end of the fiscal year, 396,000 retired employees were being paid a regular annuity averaging \$901 a month. In addition, 195,000 of these employees were being paid a supplemental Railroad Retirement annuity averaging \$45 a month. Approximately 218,000 spouses and divorced spouses of retired employees were receiving average monthly benefits of \$372, and, of the 285,000 survivors on the rolls, 247,000 were aged widow(ers) receiving average monthly benefits of \$546. Approximately 11,000 retired employees were also receiving spouse or survivor benefits based on their spouses' railroad service.

The annuities of 229,000 of the 889,000 beneficiaries included vested dual benefits. These benefits preserve equities of annuitants insured for both Railroad Retirement and Social Security benefits prior to the Railroad Retirement Act of 1974, which provided for a phaseout of dual benefits.

Railroad Retirement benefits are being increased in January 1991 to reflect a 5.4-percent increase in the Consumer Price Index (CPI) during the 12 months preceding October 1990. Cost-of-living increases are calculated in each of the two tier portions of a Railroad Retirement annuity. Tier I portions, like Social Security benefits, increase in January 1991 by 5.4 percent, which is the percentage of the CPI rise. Tier II portions increase by 1.8 percent, which is 32.5 percent of the CPI rise. In 1991, the average regular Railroad Retirement employee annuity rises about \$37 to \$939 a month and the average spouse benefit increases about \$14 to \$387 per month. For aged widow(ers), the average monthly benefit rises about \$25 to \$572. Vested dual benefit payments and supplemental annuities also paid by the Board are not adjusted for the CPI rise.

Almost 785,000 individuals who were receiving or were eligible to receive monthly benefits under the Railroad Retirement Act were covered by hospital insurance under the Medicare program at the end of fiscal year 1990. Of these, 769,000 (98 percent) were also enrolled for supplemental medical insurance.

Unemployment and sickness benefits under the Railroad Unemployment Insurance Act were paid to 55,000 railroad employees during the fiscal year. However, only about \$0.3 million (less than 1 percent) of the benefits went to individuals age 65 or older.

FINANCING

By the end of the 1990 fiscal year, the equity balance in the Railroad Retirement Account had increased from \$8.5 billion to \$9 billion and the Railroad Unemployment Insurance Account's debt to the Railroad Retirement Account had been reduced to \$357.4 million. Recent projections indicate that this debt will be fully repaid by the end of fiscal year 1994.

The Commission on Railroad Retirement Reform, which conducted a comprehensive study of long-term Railroad Retirement financing issues, released its report to Congress in September 1990. Assuming that the Railroad Retirement system continues without significant structural changes, the Commission unanimously concluded that the system is financially sound in the intermediate term and will not experience cash-flow difficulties during the next 20 to 25 years. While the long-term finan-

cial viability of the system is less certain, the Commission concluded that it is quite probable it is financially sound over the next 75 years.

1990 LEGISLATION

Omnibus Federal budget reconciliation legislation enacted on November 5, 1990, affected certain benefits paid by the Railroad Retirement Board as well as Medicare costs and coverage in fiscal year 1991 and in subsequent years, and also provided additional revenues to the Railroad Retirement trust fund.

While Railroad Retirement Tier I and tier II benefits already were exempt from Gramm/Rudman budget-balancing reductions, supplemental Railroad Retirement annuities and unemployment and sickness benefits paid by the Board have been subject to reductions under the Gramm/Rudman Act. Enactment of the 1991 budget reconciliation legislation precluded fiscal year 1991 Gramm/Rudman budget balancing reductions of 16 to 30 percent that would otherwise have been required in these benefits. The budget law also permanently exempted supplemental annuities from reductions under the Gramm/Rudman Act.

The omnibus budget legislation set increases in the monthly premium that retirees pay for Medicare medical insurance during the next 5 years, to reflect current estimates of the level necessary for premiums to cover 25 percent of program costs through 1995. That premium increased from \$28.60 a month in 1990 to \$29.90 in 1991 and will increase to \$31.80 in 1992, \$36.60 in 1993, \$41.10 in 1994 and \$46.10 in 1995. The budget law also increased the annual \$75 medical insurance deductible to \$100 in 1991 and thereafter, and made a number of changes in certain payments made to hospitals, doctors, and other suppliers of medical care. In addition, it provided coverage for mammography screening, extended coverage for hospice care under certain conditions, and mandated certain standards for insurers providing Medigap policies.

Medicare tax provisions in the budget reconciliation law increased the maximum amount of compensation subject to Medicare hospital insurance payroll tax. In 1991, earnings subject to the 1.45 percent Medicare hospital insurance tax, included in the 7.65 percent Social Security tax and Railroad retirement Tier I tax rate, increased from \$51,300 to \$125,000. The tax provisions also mandated an expedited payroll tax deposit schedule for large employers covered by Social Security or Railroad Retirement.

Finally, the budget law extended for 2 years, through September 30, 1992, the time during which revenues from Federal income taxes on Railroad Retirement benefits exceeding Social Security levels may be transferred to the Railroad Retirement Account for use in paying benefits. Legislation in 1983, which subjected Social Security and Railroad Retirement benefits to Federal income tax, had included provisions returning the tax revenues to the Social Security and Railroad Retirement trust funds, but with time limitations on the proceeds from Railroad Retirement benefits in excess of Social Security levels. The 2-year extension of those transfers will provide the Account with a total of \$300 million in additional revenues. The continuation of these transfers on a permanent basis was recommended by the Commission on Railroad Retirement Reform.

SERVICE IMPROVEMENTS

The Railroad Retirement Board is now accepting annuity applications from employees and spouses up to 3 months in advance of their planned retirement dates. Under previous rules, applications could not be filed prior to an individual's retirement date, unless the application was for survivor benefits.

This new policy is another in a series of changes the Board has made to reduce the time it takes to initiate Railroad Retirement benefit payments to new retirees. Advance filing will allow the Board to complete the processing of most new claims by a person's retirement date, so that most applicants who file early should receive all benefits due about 30 days after their actual retirement. In the last 2 years, the Board has also improved the retirement application process by electronically transmitting applications from field offices to headquarters and by other procedural changes that have substantially reduced the average processing time for initial retirement payments.

The Board has also placed high priority on improving annual benefit/tax information operations. During fiscal year 1990, the annual statements of benefit payments issued for income tax purposes were redesigned to make them easier for annuitants to read, and new programs were put into operation to provide for continuous data accuracy.

In order to determine how well the needs of its beneficiaries are being served, the Board conducted its first Client Satisfaction Survey. The survey showed that 88 percent of the respondents rated Board service as good to very good and 90 percent were satisfied with the manner in which their most recent Railroad Retirement matter was handled. Overall, the Board's survey results compared very favorably to recent Social Security Administration survey results.

OFFICIALS

President Bush appointed Glen L. Bower as Chairman of the Railroad Retirement Board in April 1990 to complete a term ending in August 1992. An attorney, Mr. Bower had been Assistant Director of the Department of Revenue for the State of Illinois since 1983 and during part of his tenure he also served as General Counsel, and as Chairman for the Revenue Board of Appeals. Mr. Bower has served on the U.S. Economic Advisory Board, 1982-85, and as Chairman of the Attorneys and Tax Appeals Section of the National Association of Tax Administrators, 1986-88. He was a Member of the Illinois House of Representatives, 1979-83, and was the State's Attorney of Effingham County, IL, 1976-79. An alumnus of Southern Illinois University (B.A. 1971), and the Illinois Institute of Technology/Chicago-Kent College of Law (J.D. 1974), Mr. Bower is a U.S. Air Force Reserve major in the Judge Advocate General's Department.

Andrew F. Reardon was appointed Management Member of the Board in October 1990 to complete a term ending in August 1993. An attorney, Mr. Reardon had been Senior Vice President of Law and Real Estate for the Illinois Central Railroad Company since 1985. Prior to that, he was General Counsel for Farm Credit Services, 1984-85; Assistant Vice President for Law for the Burlington Northern Railroad Company, 1982-84, and Assistant General Counsel for the Burlington Northern, 1981. He also was Senior Tax Counsel for the Union Pacific Railroad, 1979-81; and a General Tax Attorney for the St. Louis—San Francisco Railway Company (which later merged into Burlington Northern), 1977-79. Mr. Reardon is an alumnus of the University of Notre Dame (B.A. 1967); the University of Cincinnati—Law School (J.D. 1974); and Washington University—Law School (L.L.M. 1975). He served as a lieutenant in the U.S. Navy, 1967-71.

Charles J. Chamberlain continues to serve as Labor Member of the Board. He was first appointed upon the unanimous recommendations of railway labor organizations in October 1977 to complete a term ending in August 1979, and then reappointed three times for terms through August 1994. Prior to his first appointment, he was President of the Brotherhood of Railroad Signalmen, and had also served as Chairman of the Railway Labor Executives' Association, a coordinating and policy-making body on legislative and other matters affecting railroad workers. In addition, he served on the High Speed Ground Transportation Advisory Committee, the Railroad Safety Research Board, and the Railroad Industry Labor—Management Committee. Mr. Chamberlain began his railroad career as a signalman for the Chicago and North Western Railroad in 1938. He immediately became active in the railroad labor movement and held numerous union offices before becoming President of the Brotherhood of Railroad Signalmen in 1967.

William J. Doyle III was reaffirmed as Inspector General of the Board. Since his appointment as the Board's first Inspector General in 1986, Mr. Doyle has been responsible for promoting economy, efficiency and effectiveness and for detecting any waste, fraud or abuse in the programs and operations of the Board. Prior to joining the Board, Mr. Doyle serviced as Inspector General for ACTION, the national Federal volunteer agency. Before that he was the Executive Assistant to the Administrator of the Law Enforcement Assistance Administration at the U.S. Department of Justice. Mr. Doyle holds a Master's Degree in International Law and Relations from Catholic University, Washington, D.C.

ITEM 30. SMALL BUSINESS ADMINISTRATION

OCTOBER 15, 1990.

DEAR SENATOR PRYOR: Thank you for your letter of September 24, 1990, concerning The Senate Special Committee on Aging and the preparation of its annual report, "Developments in Aging." Our reply this year reflects no substantial change from last year.

The Small Business Administration (SBA) does not directly address the needs of older Americans. The varied services and programs sponsored by SBA are available to all citizens and we encourage older Americans to take advantage of them.

We do sponsor a particular program which may offer unusually attractive services to the older citizen. This program, the Service Corps of Retired Executives

(SCORE), has recently celebrated its 25th year of volunteer service. The SCORE program, sponsored and funded through SBA, provides free counseling and low-cost training to Americans who wish to go into business or who already own small businesses.

I have taken the liberty of enclosing some information about SCORE that you may find helpful. Please let me know if there is anything further you wish to know.

Because the vast bulk of the 13,000 volunteer members of SCORE are retired, they share a bond of age with older Americans. The program offers two distinct services to these citizens. First, SCORE offers a broad program of advice and training to those who may be interested in a new career. And second, SCORE offers a rewarding outlet for energies and experience to those who may wish to give something back to their country.

Again, thank you for your letter. I hope that I have been of some help and I appreciate your interest in small business.

Sincerely,

SUSAN ENGELEITER,
Administrator.

SCORE PROGRAM

INTRODUCTION

SCORE, the Service Corps of Retired Executives, is a volunteer program of the U.S. Small Business Administration (SBA). The SCORE Program is comprised of approximately 13,000 men and women business executives who voluntarily commit their time to share their management and technical expertise with present and prospective owners/managers of small businesses. Executives who are still employed in the business sector are eligible for ACE (Active Corps of Executives) membership of SCORE. The collective experience of these volunteers spans the full range of American enterprise. Helping America's small businesses to prosper has been SCORE's goal since the program began in 1964.

SCORE volunteers are members of locally organized, self-administered chapters in more than 700 locations throughout the United States, Puerto Rico, and the U.S. Virgin Islands. They work in their home communities or nearby to provide management counseling and training to small businesses or to those thinking about going into business. Every effort is made to match a client's need with a counselor experienced in that line of business. Counseling is provided without charge to the client.

ASSISTANCE OFFERED

Through in-depth counseling and training, owners and managers receive help in identifying basic management problems, determining their cause, and becoming better managers. SCORE counseling also can help successful firms in reviewing their distribution channels, evaluating expansion, modifying their product and other business challenges.

Management counseling is provided to a client either at the place of business or by appointment at an SBA field office or at one of the SCORE offices.

An analysis is made of each business and its problems, and a plan is offered to correct the problem and help the owner through the critical period.

ELIGIBILITY

Almost any small, independent business not dominant in its field can request assistance from SCORE. The approach is confidential and person-to-person. A business does not have to have an SBA loan nor even be in operation. Prebusiness consultation is an important part of the services offered.

ADDITIONAL INFORMATION

To find out more about SCORE, contact any SBA office or look for SCORE in the local telephone directory.

ITEM 31. DEPARTMENT OF VETERANS AFFAIRS

FEBRUARY 13, 1991.

DEAR MR. CHAIRMAN: I am pleased to respond to your request for a report of the Department of Veterans Affairs activities on behalf of older persons for the calendar year 1990.

VA has developed a high quality system that provides health care for thousands of elderly veterans every day. Meeting the medical needs of older veterans constitutes one of VA's current greatest challenges.

Thank you for allowing us the opportunity to share this information with you.
Sincerely yours,

EDWARD J. DERWINSKI.

Enclosure.

DEPARTMENT OF VETERANS AFFAIRS—VETERANS HEALTH SERVICES
AND RESEARCH ADMINISTRATION

I. INTRODUCTION

The Department of Veterans Affairs (VA) has the potential responsibility for a beneficiary population of nearly 27 million veterans whose median age is 55.3 years. Approximately 27 percent of the veteran population is age 65 and older and will increase to 37 percent by the year 2000. While the total number of veterans will decline, those over the age of 65 will rise to almost 9 million and by the year 2005 almost 4½ million will be 75 years or older.

This demographic trend will require the VA to redistribute its resources to meet the different needs of this older population. Historically, older persons are greater users of health care services. The number of physician visits, short-term hospital stays, and number of days in the hospital all increase as the patient moves from the fifth to seventh decade of life.

VA has developed a wide range of services to provide care in a variety of institutional, noninstitutional, and community settings to ensure that the physical, psychiatric, and socioeconomic needs of the patient are met. Special projects, a variety of innovative, medically proven programs and individual VA medical center initiatives have been developed and tested that can be used for veteran patients and adapted for use by the general population.

VA operates the largest health care system in the Nation, encompassing 172 hospitals, 124 nursing home units, 35 domiciliaries, and 226 outpatient clinics. Veterans are also provided contract care in non-VA hospitals and in community nursing homes, fee-for-service visits by non-VA physicians and dentists for outpatient treatment, and support for care in 63 State Veterans Homes in 38 States. As part of a broader VA and non-VA network, affiliation agreements exist between virtually all health care facilities and nearly 1,000 medical, dental, and associated health centers. This affiliation program with academic medical centers results in about 100,000 health profession students receiving education and training in VAMC's each year.

In addition to VA hospital, nursing home, and domiciliary care programs, VA is increasing the number and diversity of noninstitutional extended care programs. The dual purpose is to facilitate independent living and keep the patient in a community setting by making available the appropriate supportive medical and human services. These programs include Hospital-Based Home Care, Community Residential Care, Adult Day Health Care, Respite Care, and Psychiatric Day Treatment and Mental Hygiene Clinics.

The need for both acute and chronic hospitalization will continue to rise as older patients experience a different mix of diseases than younger patients. Cardiovascular diseases, chronic lung diseases, cancers, organic brain disorders, bone and joint diseases, hearing and vision disorders, and a variety of other illnesses and disabilities are all more prevalent in those persons age 65 and older. More often the older individual has more than one chronic condition, and the conditions tend to be progressive, degenerative, and permanent, requiring long-term rehabilitation and care.

In 1975 the Veterans Health Services and Research Administration (VHS&RA) initiated the Geriatric Research, Education and Clinical Center (GRECC) program. The GRECCs were designed as centers of excellence for the advancement and integration of research, education, and clinical achievements in geriatrics and gerontology in VA. At the present time, there are 12 GRECCs throughout the VA system.

Finally, to meet the challenge of the growing aging population, VA through its long-range planning system is identifying underutilized hospital beds that can be converted to nursing home and domiciliary care beds for the future demand.

II. GERIATRICS AND EXTENDED CARE PROGRAMS

VA NURSING HOME CARE

The Nursing Home Care Units located in VA medical centers provide skilled nursing care and related medical services, as well as opportunities for social, diversional, recreational, and spiritual activities. Nursing home patients typically require a prolonged period of nursing home care and supervision, as well as rehabilitation services to attain and/or maintain optimal functioning.

In fiscal year 1990, 27,463 veterans were treated in VA nursing homes which had an average daily census of 11,787. Additional new nursing home care unit beds were activated at Philadelphia, PA; San Juan, PR; Durham, NC; Amarillo, TX; Augusta, GA; Prescott, AZ; and West Los Angeles, CA. These and other changes resulted in a new increase of 682 operating beds for a total of 13,212.

COMMUNITY NURSING HOME CARE

This is a community-based, contract program for veterans who require skilled or intermediate nursing care when making a transition from a hospital to the community. Veterans who have been hospitalized in a VA facility for treatment, primarily of a service-connected condition, may be placed at VA expense for as long as they need nursing care. Other veterans may be eligible for placement in community facilities at VA expense for a period not to exceed 6 months. Selection of nursing homes for a VA contract requires the prior assessment of participating facilities. Follow-up visits are made to veterans by teams from VA medical centers to monitor patient programs and quality of care.

In fiscal year 1990, 29,243 veterans were treated in the program. The number of nursing homes under contract was 3,139 in fiscal year 1990. The average daily census in these homes for fiscal year 1990 was 8,835.

VA DOMICILIARY CARE

Domiciliary care in VA facilities provides necessary medical and other professional care for eligible ambulatory veterans who are disabled by disease, injury, or age and are in need of care but do not require hospitalization or the skilled nursing services of a nursing home.

The domiciliary offers specialized interdisciplinary treatment programs that are designed to facilitate the rehabilitation of patients who suffer from head trauma, stroke, mental illness, chronic alcoholism, heart disease, and a wide range of other disabling conditions. The domiciliary with increasing frequency, is viewed as the treatment setting of choice for many older veterans.

Implementation of rehabilitation-oriented programs has provided a better quality of care and life for veterans who require prolonged domiciliary care and has prepared increasing numbers of veterans for return to independent or semi-independent community living.

Special attention is being given to older veterans in domiciliaries with a goal of keeping them active and productive as well as integrated into the community. The older veterans are encouraged to utilize senior centers and other resources in the community where the domiciliary is located. Patients at several domiciliaries are involved in senior center activities in the community as part of the VA's community integration program. Other specialized programs in which older veterans are involved include Foster Grandparents, Handyman Assistance to senior citizens in the community, and Adopt-A-Vet.

In fiscal year 1990, 18,895, veterans were treated in VA domiciliaries with an average daily census of 6,681. (Of these numbers, approximately 3,500 veterans and an average daily census of more than 1,000 were admitted to the domiciliaries for specialized care for homelessness. This group has an average age of 42 years, while the overall average age is 59 years.)

STATE HOMES

The State Home program has grown from 11 homes in 11 States in 1888 to 63 State homes in 38 States. Currently a total of 19,483 beds are authorized to provide hospital, nursing home, and domiciliary care. VA's relationship to State Veterans Homes is based upon two grant programs. The per diem grant program enables VA to assist the States in providing care to eligible veterans who require domiciliary, nursing home, or hospital care in State home facilities. The other VA grant program provides up to 65 percent Federal funding in the construction or acquisition of

new domiciliary and nursing home care facilities, and the expansion, remodeling, or alteration of existing facilities.

In fiscal year 1990, the Secretary recognized new State homes at Alexander City, AL; Lake City, FL; Caribou and Scarborough, ME; and Cape Girardeau, MI. The Secretary is in the process of recognizing a 120-bed nursing home at LaSalle, IL, and during fiscal year 1991, expects to recognize new State homes at Anderson, SC; Stony Brook, NY; Murfreesboro, TN; Wilmore, KY; and Silver Bay, MN. The \$45.5 million obligated by VA in fiscal year 1990 for construction and renovation projects also included new State homes in Scranton, PA, for 180 nursing home care beds and 20 domiciliary beds; a 66-bed nursing home at Pocatello, ID; 120-bed nursing home at Walsenburg, CO; and a renovation project to convert some domiciliary beds to 38 nursing home care beds at Lisbon, ND. Construction is expected to begin on a new State home in Roanoke, VA to provide 240 nursing home care beds.

PALLIATIVE CARE

VA has developed programs which furnish palliative care, supportive counseling, and other medical services to terminally ill veterans, as well as supportive counseling to their families in various service settings. The hospice concept of care is generally incorporated in VA medical centers' approaches to the care of the terminally ill.

HOSPITAL-BASED HOME CARE

The program provides primary medical care to veterans with chronic illnesses in their own homes. The family provides the necessary personal care under the coordinated supervision of a hospital-based interdisciplinary treatment team. The team provides the medical, nursing, social, rehabilitation, and dietetic regimens, as well as the training of family members and the patient.

Seventy-five VA medical centers are providing hospital-based home care services. More acute beds in hospitals are made available by providing increased days of care in the home.

In fiscal year 1990, 296,751 home visits were made by health professionals. Over 16,145 patients were treated.

ADULT DAY HEALTH CARE

Adult Day Health Care (ADHC) is a therapeutically oriented ambulatory program that provides health maintenance and rehabilitation services to veterans in a congregate setting during daytime hours. ADHC in the VA is a medical model of services, designed as a substitute for nursing home care, as established by Public Law 98-160. VA continued to operate 15 ADHC centers in fiscal year 1990. The average attendance was 425 and 1,113 patients were enrolled in fiscal year 1990. VA also continued a program of contracting for ADHC services at 22 VA medical centers. Ninety-six contracts have been established. The average attendance was 137 and 662 patients were treated in fiscal year 1990.

COMMUNITY RESIDENTIAL CARE

The residential care home program provides residential care, including room, board, personal care, and general health care supervision to veterans who do not require hospital or nursing home care but who, because of health conditions, are not able to resume independent living and have no suitable support system (e.g., family, friends) to provide the needed care. All homes are inspected by a VA multidisciplinary team prior to incorporation of the home into the VA program and annually thereafter. Care is provided in private homes that have been selected by VA, at the veteran's own expense. Veterans receive monthly follow-up visits from VA health care professionals. In fiscal year 1990 an average daily census of 9,400 veterans was maintained in this program utilizing approximately 2,400 homes.

GERIATRIC EVALUATION AND MANAGEMENT PROGRAM

The Geriatric Evaluation and Management (GEM) Program includes inpatient units, outpatient clinics, and consultation services. A GEM unit is usually a functionally different group of beds (ranging typically in number from 4 to 20) on a medical service or an intermediate care ward of the hospital where an interdisciplinary health care team performs comprehensive geriatric assessments. The GEM unit serves to improve the diagnosis, treatment, rehabilitation, and discharge planning of older patients who have functional impairments, multiple acute and chronic diseases, and/or psychosocial problems. GEM clinics provide similar comprehensive

care for geriatric patients not in need of hospitalization as well as follow-up care for patients discharged from the hospital. In addition to improving care for older patients and preventing their unnecessary institutionalization, a GEM unit provides geriatric training and research opportunities for physicians and other health care professionals in the medical center.

Results from a controlled, randomized study of GEM efficacy that was conducted at the VA Medical Center Sepulveda, CA, showed significant benefits such as improved survival, decreased rehospitalization rates, improved functional status, and decreased nursing home placement following admission to the GEM unit.

Currently, 93 VA medical centers have established Geriatric Evaluation and Management Programs. Further expansion of the program is anticipated.

RESPITE CARE

Respite Care is a program which provides planned, periodic, short-term care for a disabled person in order to temporarily relieve the caregiver from the physical and emotional burden of providing the needed care and supervision. VA provides respite care by admitting a veteran to a hospital or nursing home bed for up to 30 days a year. This institutionally based program not only supports the caregiver's role in caring for the veteran at home, but also provides an opportunity for VA staff to evaluate and treat the veterans health care needs and offer guidance to the caregiver in the home treatment plan. In FY 1990, 118 VA medical centers provided this care to veterans and their families.

ALZHEIMER'S DISEASE AND RELATED DISORDERS

VA's program for veterans with Alzheimer's disease and related disorders is decentralized throughout the medical care system with coordination and direction from the Office of Geriatrics and Extended Care. Veterans with these diagnoses participate in all aspects of the health care system including outpatient programs, acute care programs and extended care programs. Approximately 56 medical centers have established specialized programs for the treatment of these veterans.

Currently, 31 facilities have inpatient dementia units, 22 have outpatient dementia programs, 25 have dementia assessment clinics and 8 facilities have established dementia registries. In order to advance knowledge about the care for veterans with dementia, VA conducts basic biomedical, applied clinical and health service research through the Office of Research and Development and the Geriatric Research, Education and Clinical Centers (GRECCs). Rehabilitation Research and Development Service develops and evaluates new technologies and techniques designed to minimize excess disability associated with dementia. Continuing education for staff is provided through training classes sponsored by Regional Medical Education Centers, GRECCs, and Cooperative Health Manpower Education Programs.

During FY 1990, VA disseminated education materials in the form of publications and videos to all medical centers. These included a revised edition of Guidelines for Diagnosis and Treatment of Dementia, a series of 21 dementia caregiver education pamphlets developed by the Minneapolis GRECC, and 3 video tapes on Alzheimer's disease developed by the Bedford division of the Boston GRECC. Currently, VA is surveying a sample of medical centers with established inpatient units for patients with dementia. Information from this survey will be utilized for planning future programs, including specific educational needs of health care providers in the area of Alzheimer's disease and related dementias.

GERIATRIC RESEARCH, EDUCATION AND CLINICAL CENTERS

The Geriatric Research, Education and Clinical Centers assume an important role in further developing the capability of the VA health care system to provide maximally effective and appropriate care to older veterans. First implemented in 1975, GRECCs are designed to enhance the system's capability in geriatrics by conducting integrated research, education and clinical care. The goals of the GRECCs are to develop new knowledge regarding aging and geriatrics, to disseminate that knowledge through education and training to health care professionals and students, and to develop and evaluate alternative models of geriatric care.

Each GRECC has developed an integrated program of basic and applied research, education, training, and clinical care in select areas of geriatrics. Current focal areas include cardiology; cognitive and motor dysfunction and neurobiology; endocrinology, neuroendocrinology, metabolism and nutrition; geropharmacology; immunology, oncology and infectious diseases; rheumatology; and molecular biology of aging. Using an integrated approach, the GRECCs are developing practitioners, educators, and researchers to help meet the need for training health care professionals in the

field of geriatrics; providing information for as well as establishing models on cost-effective approaches to care of the elderly; and researching better methods to diagnose and treat health care problems of the older person as well as finding answers to fundamental questions on the process and consequences of aging.

At present there are 12 GRECCs. Ten are fully operational and are located in VA medical centers at Bedford and Brockton/West Roxbury, MA (2 divisions); Durham, NC; Gainesville, FL; Little Rock, AR; Minneapolis, MN; Palo Alto, CA; St. Louis, MO; Seattle/American Lake, WA (2 divisions); Sepulveda, CA; and West Los Angeles, CA. Two new GRECCs began operation in fiscal year 1989 at Ann Arbor and San Antonio VA medical centers. Public Law 99-166, "Veterans Administration Health Care Amendments of 1985", increased from 15 to 25 the maximum number of facilities that the VA Administrator (now Secretary of VA) may designate for GRECCs.

III. OFFICE OF CLINICAL AFFAIRS

MEDICAL SERVICE

The Medical Service serves as the primary source of physicians for the care of elderly patients. Due to the aging of the population, the Medical Service is increasingly involved in all aspects of the delivery of health care to the aged. Acute and intermediate medical wards, coronary and intensive care units, nursing homes, and outpatient clinics are all seeing an increased proportion of elderly patients with acute and chronic illnesses.

Some subspecialty areas are particularly impacted, including cardiology, endocrinology (diabetes), rheumatology and oncology. The Medical Service provides necessary subspecialty care in inpatient and outpatient settings in addition to participating in Geriatric Fellowship Training, GRECCs, Geriatric Evaluation Units (GEU's), Hospice, Respite, Hospital-Based Home Care, and Senior Clinicians Programs. The specialized care that is required by the elderly has been recognized by Medical Service at approximately 25 VA medical centers, by their establishment of a Chief of Geriatric Medicine Section, which emphasizes clinical care, as well as coordinating research and education efforts related to geriatrics.

Age alone is less frequently used as a determinant of an individual patient's care. Geriatric patients increasingly undergo cardiac catheterization and cardiac catheterization laboratories are being established according to demographic need. The Sunbelt is experiencing an increasingly heavy catheterization load. Similarly, the average age of patients treated in coronary and intensive care units is increasing, producing a concomitant demand for cardiac rehabilitation and physical fitness programs that are targeted to the frail elderly and the physically handicapped of all ages. Career treatment programs are also expanding. The special interest and involvement of Medical Service in geriatrics has also resulted in participation by internists in such programs as Adult Day Health Care, as well as in research problems in nutrition and treatment of hypertension.

Smoking cessation has been shown to benefit even elderly patients, thus the role of preventive medicine for this patient population has expanded. The Medical Service has been active in implementing preventive strategies in smoking cessation, immunization (influenza and pneumococcal vaccines), and colorectal screening (for cancer).

The Medical Service has actively participated in the Intermediate Care Advisory Group and new guidelines for VA's intermediate care programs were issued in Circular 10-89-132. Evaluation and treatment of elderly patients by interdisciplinary teams during intermediate-length hospital stays will be an increasingly important role for the physicians of the Medical Service.

SOCIAL WORK SERVICE

The changing demographics and health care requirements of the Nation's veteran population is confronting us with the need for new and/or modified modes of health care and structures through which they can be provided. Rising costs of health care personnel, technology and supplies; problems of recruitment and retention of high quality staff; increased numbers of eligible veterans coming to the VA for care they cannot afford elsewhere and nearly a decade of straightline budgets have set the stage for the challenges of the Nineties.

Within this context the VA Health Care System must ensure the following:

- a. Availability of a comprehensive range of health and social services.
- b. A system which ensures that patients are provided with the appropriate level of care.

c. That coordination and continuity of service is achieved along the care continuum.

Social work service has placed national priority on the development of a wide range of alternative care levels and service delivery models focuses on expanding the continuum of care and ensuring continuity of services to patients. Areas of social work and related areas of development include:

Discharge Planning Services.

Care Coordination/Case Management Services across VA and Community Service systems.

Access, Coordination and Development of Community Services.

Systems for Development and Support of Family/Community Caregivers.

Expanding Health Care Resources Through Creative Use of Community Based Volunteers.

Numerous initiatives are in the planning/development phase which we believe will serve the needs of our older veterans population and at the same time promote a more efficient use of VA, Federal sector, and community resources in serving the long-term care needs of veterans and their caregivers. For example, a caregiver support manual has been developed which will assist VA staff in understanding and supporting the vital and critical role that caregivers (primarily elderly spouses) play in providing care that enables the older veteran to remain in his or her own home in surroundings which are conducive to his social and health care needs. This manual will be distributed to all VA medical centers and will be a valuable resource for veterans, caregivers, and health care staff who are concerned about the provision of supportive services by caregivers whose own health is sometimes marginal and who require assistance in managing the burden of care for their spouses. Their role expands the parameters of VA care and enables the veteran to remain at the most appropriate level of care outside of the boundaries of the institution. The Senior Companion Program operational at 38 VA medical centers in cooperation with Voluntary Service, provides a major support component to caregivers as well as to older veterans in their own homes. A majority of the volunteers in this program are members of veterans services organizations.

There is growing empirical and statistical evidence that a sizable number of veterans are receiving care in skilled community nursing homes at VA expenses who could be cared for more appropriately in their own homes if additional social and health related services were available and accessible. There are others whose discharges from our medical centers are delayed because a broad range of less costly alternative levels of care are currently unavailable or cannot be accessed because of VA funding restrictions. Public Law 101-366 (8/15/90) "Pilot Programs on Provision of Noninstitutional Alternatives to Nursing Home Care" authorizes the establishment of pilot programs for provision of medical, rehabilitative, and health-related services for veterans who meet the eligibility requirements for and are in need of nursing home care. This legislation allows the VA to pilot a program of services at designated medical centers. Where such services were not available, casemanagers could be authorized to negotiate for a broad range of support services from qualified contractors. Cost containment would be insured through a cap on services cost.

All VA medical centers have appointed social work homeless coordinators to address the special needs of this vulnerable population. This special outreach activity addresses the needs of veterans who are not served by the specially funded programs for this population at 60 medical centers.

A residential services subcommittee has been established under the aegis of the Social Work Service Resources and Program Development Committee to address the special housing needs of a target population that cannot be readily accommodated within existing programs. The subcommittee will provide guidance and consultation to medical center staff in addressing this developing area of service.

Social Work Information Management System (SWIMS) which is currently being developed will enable us to define the psychosocial problems, social work services received, community resource needs, and community resources that are being utilized by our elderly veterans population.

REHABILITATION RESEARCH AND DEVELOPMENT

The mission of the Rehabilitation Research and Development (Rehabilitation R&D) Service is to "support research for improving the quality of life of impaired, disabled and handicapped veterans, including our aging veterans." This is accomplished by conducting a program of research, development, and evaluation of new and unique devices, techniques, and concepts of rehabilitation that will allow more functional independence in the activities of daily living of physically disabled and infirm veterans.

The Rehabilitation R&D Service has established a significant interest area in the field of aging. The Rehabilitation R&D Service will actively promote this effort through the following:

- Stimulate new R&D in VA Medical Centers to meet the needs of disabled aging veterans.

- Support a Rehabilitation R&D unit at Decatur, GA, whose primary focus is the needs of aging veterans.

- Evaluate in VA medical centers newly developed devices, techniques, and concepts on rehabilitation as they pertain to the aged.

- Promote commercialization of the products of VA-sponsored R&D.

- Promote the utilization of rehabilitation R&D technological advances developed by our research and that of others by dissemination of the *Journal of Rehabilitation Research and Development* and articles in other professional journals.

In addition to the Rehabilitation R&D unit at Decatur, GA, specializing in aging and merit-reviewed projects at VAMC's throughout the Nation, Rehabilitation R&D supports two other Rehabilitation R&D Centers which conduct research impacting on aging. One of these centers is located in Palo Alto, CA. In collaboration with Stanford University, this center conducts research in orthopedic, biomechanics, and man-machine integration as it relates to robotics, and analytic modeling of disability and devices. Another center is located at Hines, IL, with research emphasis in orthopedic surgery and visual deficiencies.

One of the unique problems that the elderly experience is that of mobility. Wheelchairs provide mobility for the elderly. In the early 1940's, the wheelchair was revolutionized with the design and manufacture of a portable, lightweight, strong, and maneuverable model. Since then the most important innovation has been the powered chair. Rehabilitation R&D has been supporting several efforts to make wheelchairs more useful to those who need them. We have supported the development of standards for wheelchair manufacture and design and these standards have been submitted to and accepted by the American National Institute of Standards. There are approximately 125 wheelchair manufacturers in the United States today, each making a variety of models.

Three major problems which wheelchair users experience are: (1) the inability to make the wheelchair go when one or both arms of the individual lacks strength or function to operate the wheelchair; (2) to make the wheelchair go sideways or kitty-cornered as well as forward and backward; and, (3) to surmount the barriers of stairs, curbs and uneven terrain.

The Rehabilitation R&D Center at Palo Alto, CA, has developed an Ultrasonic Head controlled wheelchair. In this design, head movements of the patient activate two polaroid ultrasonic distance ranging sensors which generate control signals for the operation of the chair. Another researcher at Palo Alto is working on an optimal biomechanical design for the development of an arm powered mobility vehicle. The thrust of this work is the search for the most mechanically efficient method of powering wheelchairs with the upper extremities. Another design out of Palo Alto, now commercially available is the omnidirectional wheelchair which can move in any direction.

A very sophisticated kind of environmental control which has relevance to the needs of older persons is the family of robotic arms—articulated metal arms that can be programmed for some basic function. The robot can be useful for assisting in eating, grooming, reaching for a book, turning a page, or summoning an attendant. Some respond to voice commands. The Rehabilitation R&D Service is in the process of commercializing the first generation of robotic arms for use with paraplegics—who are enthusiastic about the degree of independence robotic arms provide. Research is being conducted to establish the man-machine interface for older persons.

The Rehabilitation R&D unit in Decatur, GA, is pursuing research in the care of individuals who are demented, particularly those with dementia of the Alzheimer's type. Wandering is a serious problem for both caregivers and elderly persons who engage in the behavior.

One of the questions that was posed is whether or not a wanderer's behavior could be changed or modified or redirected. A pilot study being conducted by the Rehabilitation R&D unit at the VA Medical Center, Decatur, nursing home offers some preliminary results that seem to indicate that it is possible to intervene in the behavior of a wanderer using verbal commands.

The Rehabilitation R&D Service is in the process of digitizing hearing aids. One of the problems that hearing aid wearers face is the inability of the clinician to adjust the hearing aid to the specific and unique characteristics of the wearer. Rehabilitation R&D is supporting research that is approaching commercialization on the digi-

tized hearing aid. This important development involves the use of a computer to fine-tune the hearing aid to the specific hearing loss frequencies of an individual.

Rehabilitation R&D is also putting computers to use in working with aphasics. Significant research is being directed to helping those who cannot communicate, particularly those who have lost the ability to recognize everyday items and to articulate them. A specialized language has been constructed based on flash card technology to assist the aphasic in understanding the spoken language and communicating.

Another example of Rehabilitation R&D-supported research in the area of aging concerns the use of computer-assisted therapy for aphasics. This is an instance where computers have bridged the gap between the availability of trained manpower and individuals who need therapy. In Birmingham, AL, research has been completed which has shown that it is possible for a computer to be programmed to conduct speech therapy by telephone.

REHABILITATION MEDICINE SERVICE

Rehabilitation Medicine Service (RMS) strives to provide all referred older persons with comprehensive assessment, treatment, and follow-up of physical disability effecting functional independence and quality of life. Through the use of physical agents, therapeutic modalities, and exercises RMS therapists assist the patient in developing and attaining specific goals.

Approximately 24,000 veterans per year are treated and discharged in over 1,400 RMS beds at 75 medical centers. Physicians, usually physiatrists, lead teams of therapists and other interdisciplinary professionals. Growth rate of 8 percent in the number of RMS beds is forecast for the next 5 years.

Occupational therapists, physical therapists, along with kinesio-therapists and other rehabilitation professionals are leading and participating in innovative treatment formats including home-bound health care, independent living centers, geriatric evaluation units, Alzheimer units, and palliative care-hospice care centers. They are working, teaching and receiving education in special programs including (GRECCs). Funded educational opportunities are available for occupational and physical therapists and physicians at Interdisciplinary Team Training in Geriatrics (ITTGs).

Handicapped driver training centers are staffed at 39 VA medical centers to meet the needs of aging and disabled veterans. Classroom education updates in laws and defensive driving techniques are supported with behind-the-wheel drivers observation from driver training professionals.

A Uniform Functional Independence Measure (FIM) patient assessment is being implemented throughout the VA rehabilitation system. Therapist raters are being trained to apply an 18 element life function measure at time of admission, regularly during treatment, and at discharge. Application of FIM results to quality management activity will assist local and national rehabilitation clinicians and managers maximize effectiveness and efficiency of rehabilitation care delivery. This administrative data base called the Uniform Data System (UDS) will increase accuracy of developing predictors, and ideal methods of treatment for veterans with various diagnoses.

NURSING SERVICE

Nursing care of the elderly veteran is a vital part of the Nursing Service mission and comprises the largest proportion of health services required by this age group. Recognizing the rapid increase in the number of aging veterans being admitted for care in all treatment modalities, Nursing Service is making a concerted effort to provide strong leadership in the clinical, administrative, research and educational components of nursing practice.

Academic preparation is a high priority of Nursing Service to assure quality programs for treatment and rehabilitation of aged ill, disabled, and at-risk veterans. Graduate nursing students receive clinical education experience in Geriatric Evaluation and Management Programs, Nursing Home Care Units, and Hospital Based Home Care programs. While the demand for rehabilitation nurse specialists has been increasing, the supply has been diminishing over recent years, due primarily to the nursing shortage and the reduction in nurse traineeship funds for graduate education in this specialty area. Recruitment of highly qualified professional nurses in an on-going priority. One hundred and eleven positions were funded in 1989 by the Clinical Nurse Specialist Program for masters level nursing students in either geriatric/gerontological, rehabilitation, or psychiatric/mental health nursing. Sixty-three were funded in these areas in 1990 in 46 VA medical centers. Twenty-eight

were funded in geriatric-gerontological nursing, 1 in rehabilitation nursing, and 34 in psychiatric/mental health nursing.

Executive development of nurse leaders in long-term care is provided through preceptorship training for the position of associate chief of supervisor, nursing home care. Currently, 37 supervisors of nursing home care have been approved for discretionary title of associate chief, nursing service for nursing home care.

Preventive care and health promotion incentives are implemented to preserve independence, foster productivity and enhance the quality of life by improving the health status of aging veterans. Proper screening, education and referral of elderly veterans are vital to meeting their health care needs. The "young old," ages 65-74 are relatively healthy and concerned with maintaining their health and independence. Nurses in wellness clinics and other ambulatory care settings provide supervision, screening, and health education programs to assist veterans in maintaining healthy life styles.

Programs for the physically disabled and cognitively impaired have been established and are administered by nurses in home care, ambulatory care settings and inpatient units. Treatment programs are goal-directed toward physical and psychosocial reconditioning or retraining of patients with biological and psychosocial disturbances. Patient and family teaching is a major part of each program. Family and significant others have a key role in providing support to aging veterans and are assisted in learning and in maintaining appropriate caregiver responsibilities. VA nurses contribute to planning and implementing health care services for the elderly in the community-at-large. They participate in self-help and support organizations related to specific diseases such as Alzheimer's, are advisors to local health planning councils, and share VA educational activities and research seminars with other health care professionals.

While progress has been made in the care of aging veterans, increasing demands, shortages of critical health care personnel, and cost containment issues require more effective coordination of health care delivery to prevent fragmenting of care and inappropriate institutionalization. Practice models are needed to facilitate the care of aging veterans throughout the health care continuum and to assure access to the appropriate level of care in the most cost-effective setting. Professional nurses function as part of interdisciplinary teams to coordinate and provide care in settings beginning with GEMs and progressing along many care settings including ambulatory care, acute care, intermediate care, long-term care and community agencies.

Continuing education is essential to assure all levels of staff have knowledge and skills to meet needs of this rapidly growing age group. Nursing was part of several national task forces responsible for national training programs focused on improving the quality of health care for aging veterans. These programs included:

"Health Care Problems of the Elderly" was presented in one region for seven medical centers to an interdisciplinary team composed of seven disciplines. Members of the task force continue to serve as consultants to interdisciplinary teams in all medical centers who have attended this program to assure that plans are implemented and care to aging veterans is evaluated.

"Ambulatory Care of the Elderly" was presented in 2 regions to interdisciplinary teams from 81 VA medical centers and 2 outpatient clinics. The focus of this program was proper assessment, screening, referrals, and coordination of care in the ambulatory care settings.

A third program, "Long Term Care of the Mentally Ill," was designed to improve the quality of care to mentally ill patients in VA nursing home care units. It was presented as a pilot to interdisciplinary teams from seven nursing home care units. Plans are to continue this program for as many nursing home care units as funding will allow.

Nursing and pharmacy initiated an interdisciplinary program to improve the quality of life for aging patients in VA nursing homes through creative nonmedication alternatives to treat symptoms commonly seen in nursing home patients. Fourteen clinical services in VACO serve as the steering committee for this program. Pilot programs established at Dallas and Washington VAMCs are designed to reduce the number of medications used by nursing home patients, improve their functional status and enhance the satisfaction of staff working in nursing home care units. It is expected that the program will result in decreased medication usage, decreased expenditures for medications, clinical improvements in the quality of life of patients and improvements in the professional work environment. Program descriptions and successful components will be shared with other medical centers for adoption into their program. Plans are also to expand the scope of the program to include other programs servicing aging veterans.

Professional nurses are encouraged and supported in their efforts to conduct research, especially in clinical settings. Research is needed to advance health care for older persons and to improve gerontological nursing practice. Areas in which research are urgently needed to improve the quality of care include:

Urinary incontinence, falls, care of Alzheimer's patients, wandering behavior, dementia, nutrition, exercise, mobility, psychotropic medication, health promotion, frail elderly in the home setting, and alternatives to institutional care.

As the number of female veterans increases, studies are needed to enhance the quality of life for aging female veterans in a health care system largely focused on the male model of care.

DIETETIC SERVICE

Dietetic Services in all VA medical centers are continuing efforts to strengthen the nutritional care of the older veterans. The provision of adequate nutrients in a consumable form is particularly challenging. This past year dietitians at Hines participated in a taste panel of 30 products developed by the Food Engineering Directorate U.S. Army Natick Research for elderly patients with swallowing or chewing difficulties. To date 50 powders are available that when reconstituted taste like components of a normal meal. In 1991 patients in six of our medical centers will be consuming and rating a 5-day menu of 56 liquid products (not pureed). They will be evaluating the appearance, flavor, consistency, texture, ease of sipping, variety, portion size, and overall acceptability. Dietitians will be comparing the nutrient intakes and changes in weight in patients using the Natick foods as compared to those consuming the current dental liquid diet.

National Training Program on Health Care Problems of the Elderly has planned a satellite broadcast program for the second quarter of 1991. One outcome this task force hopes to achieve is the development of a resource guide that lists demographics of the country and the VA, geriatrics-related training programs, innovative clinical models, major research topics and resources. The thrust of this group is to promote multidisciplinary care to improve the quality and cost-effective utilization of resources. This past year conferences were held in Minneapolis and Northport/Arlington. Activities following the conference included the following: evaluation of assessment tools for geriatrics; conducting a literature search on assessments; and compiling an interdisciplinary assessment tool which will be piloted.

The feeding incident uncovered late in FY 1990 has directed our attention to assuring that the patient not only receives his food but is fed. Some medical centers are using color coded tickets/trays to identify feeders. If the food is untouched, the clinical dietetic technician and/or food service worker will report this to the dietitian who will pursue corrective action.

Determining the nutritional care needs and developing a care plan to achieve these goals is very complex when managing an older person. In order to concentrate efforts on this large segment of our population, geriatric nutrition specialist positions will be released soon in the clinical affairs letter.

Another joint project we are pursuing is the American Dietetic Association's, American Academy of Family Physicians's and National Council on Aging's National Screening Initiative. This project was launched on May 22, 1990, as a 5-year, multifaceted effort to promote routine nutritional assessments and better nutritional care. The initial focus will be the elderly. Several VA dietitians have been involved in planning an educational program for the public and health care providers. The project also plans to inform policymakers about the health needs of the elderly.

IV. DENTISTRY

Dentistry is an integral part of any comprehensive health care program for the elderly. Freedom from tooth-related pain is a primary objective, of course, but there are a number of other major concerns. The incidence of many oral diseases that do not initially cause pain, from periodontitis to cancer, increases significantly with advancing years. Additionally, many older people lose a sufficient number of teeth to interfere with effective mastication, so that nutritional deficiencies and gastrointestinal problems are a common result. Perhaps as important, the ability to enjoy a varied, interesting diet is compromised—a factor in quality of life. Similarly, the integrity of the dental complex plays a major role in facial appearance and in oral communication, which are so important to self-image and societal function.

VA is pledged to "provide elderly veterans with a range of medical and health services that are designed to restore and/or maintain optimal levels of health, foster independent living, and improve overall quality of life." With this in mind, the VA

Office of Dentistry is involved in a number of initiatives to cope with the dental health needs of the burgeoning numbers of older veterans.

The VA Dentist Geriatric Fellowship Program is now in its ninth year of operation. The first five dentists who entered this program completed their 2-year program in June 1984. At that time, the Office of Dentistry implemented a plan whereby interested VA health care facilities submitted proposals that outlined their intended use of such an uniquely trained individual. Facilities with approved programs that successfully recruited a graduate received FTE and funding for their placement. This mechanism has allowed us to retain the majority of the graduates for service with VA. Of 35 who completed the program, 26 of them are currently employed at VA medical centers across the country. In addition, judging by publications, honors, and offices held, they have taken their places among the leaders in dental geriatrics both nationally and internationally. At their individual facilities, their responsibilities vary, but most of these dental geriatricians have also developed linkages with nearby VA facilities, community nursing homes, and geriatric activities at affiliated universities.

Although there is considerable interest directed at the Geriatric Fellowship Program and at the facilities that now employ dentists who are graduates of that training, other VA dental facilities are not without their concerns and programs for the aging veteran. VA dental personnel at all levels are aware of the rapid aging of the veteran population. Elderly patients are treated on a daily basis and most facilities now have at least one dentist who has attended a continuing education course in geriatric dentistry or a course in hospital dentistry that emphasized special care for the elderly. In addition, facilities with special expertise in geriatric dentistry are now being encouraged to add a second year to their General Practice Residency (GPR) programs to concentrate on gerontology and clinical care of the older adult.

Of particular concern to VA dentistry is the oral health needs of veteran patients in VA extended care facilities. Often frail and functionally impaired, many of these patients have extensive oral health needs and present a significant challenge for the dental staff. The Program Guide: *Oral Health Guidelines for Long Term Care Patients*, developed several years ago by VA Office of Dentistry, continues to serve as the primary handbook for management of the multidisciplinary efforts in this important area of geriatric care.

The VA's impact on geriatric dentistry is not limited to its own health care system, but extends to the national scene as well. The ACMD for Dentistry regularly participates in the NIDR (National Institute for Dental Research) group that is involved in reviewing oral health promotion and disease prevention initiatives throughout the country. VA also has been represented on a U.S. Surgeon General's workshop relating to the same topic. In education, the American Association of Dental Schools (AADS) has an ongoing Geriatric Education Project. Its goal is to enhance the quality of dental services that are available to older people in the United States by improving the teaching of geriatric dentistry in dental and dental hygiene schools. VA dentists participate, playing a major role, in the working committees formed to design curriculum and identify resource material for faculty utilization.

In research, the VA has been involved in a collaborative project since 1984 with the National Institute on Aging (NIA) and the National Institute of Dental Research (NIDR). The project emerged from discussions among the Directors of the NIA and NIDR, Dr. Franklin Williams and Dr. Harold Loe, respectively, and the VA Assistant Chief Medical Director for Dentistry. They agreed to pursue a project that would produce three products: a research agenda for oral health and related problems in the elderly, a catalog of relevant resources and activities, and an implementation plan that would recommend cooperative efforts between the three agencies in response to high priority research questions. A core staff and a project advisory panel that represented the three organizations were appointed, and the project has since begun its implementation phase. An initial venture resulted in the funding of a research center on oral health and aging as a cooperative effort of the VA Medical Center in Gainesville, FL and the University of Florida College of Dentistry. Currently, a collaboration of the same Federal agencies is involved in the design of a 5-year fellowship to develop advanced research and clinical skills in oral health for the elderly.

The Office of Dentistry staff and consultants have completed the analysis phase of a project that surveyed oral health needs of patients in VA nursing homes. The results will be used to enhance oral health programs as well as to project present and future needs for manpower and other resources. Similarly, two former geriatric fellows, now on VA staff, are currently studying the oral health needs of Hospital-Based Home Care (HBHC) patients.

V. HEALTH SERVICES RESEARCH AND DEVELOPMENT

Health services research and development (HSR&D) is an area of research designed to enhance veterans' health by improving the quality and cost-effectiveness of the care provided by the Department of Veterans Affairs. The focus of VA HSR&D is on both advancing the state of knowledge about health services in VA and the Nation, and on disseminating that knowledge disseminated for practical use. The large number of aging veterans and their increasing health care needs make this population particularly important for HSR&D to study. Each of the Service's three major program areas emphasized aging in 1990.

(1) The Investigator Initiated Research (IIR) program encourages and supports projects proposed and conducted by VA researchers, clinicians, and administrators throughout the Nation. In this intramural program of health services R&D, VA staff conduct merit reviewed and approved projects in VA Medical Centers with oversight and advice from Central Office. The IIR program comprised 56 percent of the 1990 HSR&D budget.

Forty-three percent of the Service's 83 HSR&D investigator initiated projects addressed questions important to aging veterans. New studies include: patient views of advance directives; improving glycemic control in the elderly; and nutrition for the older hypertensive veteran. Ongoing studies include: examining hospices for Alzheimer patients; exercise for the elderly prone to falls; and geriatric rehabilitation. Highlights among the 30 IIR research studies completed in 1990 were those addressing elderly dental care, alcohol treatment, and self-medication. Also completed was an investigation of the impact of Medicare treatment reimbursement changes.

(2) The HSR&D Field Program is a network of core VA staff assigned to selected medical centers. Staff conduct independent research and collaborate with community institutions in support of program objectives. In 1990, the Service funded eight ongoing HSR&D field programs encompassing 25 VA medical facilities. A comprehensive evaluation was completed for each of these programs and five were granted continuing funding. Three new field programs were selected competitively for full scale funding in 1991. Field programs comprised 29 percent of the 1990 HSR&D budget.

The field programs serve as centers of excellence in selected subject areas. While all field programs are interested in problems pertinent to aging, three make aging their primary focus. The Northwest Field Program at Seattle continues to provide leadership in care of the aging; the Midwest Field Program emphasizes gerontology and rehabilitation; and the recently established Field Program at Bedford is a Center for Health Maintenance of Aging Veterans. Field Programs foster the integration of research and practice by VA managers and clinicians. They also link research with local patient care and administrative needs. The field programs have trained more than 80 pre-doctoral students and produced approximately 1,400 publications and 1,000 presentations.

Field program completed the following studies of the elderly in 1990: use of interdisciplinary team care for older veterans; development of a predictive model for readmissions of hospitalized elderly; comparison of patients in academic and community nursing homes; and analysis of the oral health needs of long-term care patients; and a study of the caregivers of frail elderly patients.

In 1990, HSR&D Service expanded two field programs in a cooperative effort with Medical Research Service to support two centers for Cooperative Studies in Health Services Research. These Centers are providing planning and coordination for the multifacility studies in health services research. The anticipated use of common protocols and data sets is expected to yield more definitive findings than may be available in other health care research environments. The VA health care system offers a unique opportunity in which to conduct such large scale, multisite outcome-oriented research. This opportunity is enhanced by linking the skills of cooperative study centers and HSR&D field programs.

(3) The Special Projects program conducts research assessments, syntheses, and other special research projects responsive to specific needs identified by Congress or Department officials and assists in transforming health services research into practice. This is a centrally directed program of health services R&D conducted by VA field staff, in-house staff, and/or contractors to solve specific problems. In 1990, special projects emphasized issues in aging and rural health and comprised 15 percent of the HSR&D budget.

A major ongoing project in 1990 was the Adult Day Health Care evaluation. This study comprises two components: a randomized controlled trial to evaluate VA ADHC relative to nursing home care and an evaluation of the cost-effective-

ness of adult day health care relative to such care funded by the VA but provided by the private sector.

The service was also sponsored, with the Robert Wood Johnson Foundation and the National Institute on Aging, a conference toward identifying key research issues regarding geriatric evaluation and management. As a result, the service issued a request for applications for proposals to conduct multisite studies of geriatric evaluation and management units. Planning for two studies on this topic begins in 1992. The conference proceedings are also being prepared as a special issue of a major journal.

VI. OFFICE OF ACADEMIC AFFAIRS

All short and long range plans for VHS&RA that addressed health care needs of the Nation's growing population of elderly veterans include training activities supported by the Office of Academic Affairs (OAA). The training of health care professionals in the area of geriatrics/gerontology is an important component in a variety of programs conducted at VA medical centers in collaboration with affiliated academic institutions. Work with geriatric patients is an integral part of the clinical experience of the nearly 100,000 health trainees including 30,000 resident physicians and 40,000 nursing and associated health students who train in VA medical centers each year as part of affiliation agreements between the VA and nearly 1,000 health professional schools, colleges, and university health science centers. Recognizing the challenges presented by the ever-increasing size of the aging veteran population, the OAA has made great strides in promoting and coordinating interdisciplinary geriatric and gerontological programs in VA medical centers and in their affiliated academic institutions.

The Office of Academic Affairs, in the VHS&RA, supports geriatric education and training activities in the following special programs:

VA FELLOWSHIP PROGRAMS IN GERIATRICS FOR PHYSICIANS AND DENTISTS

Geriatric Medicine

The issue of whether or not geriatrics should be a separate medical specialty or a subspecialty was resolved in September 1987 when the Accreditation Council for Graduate Medical Education (ACGME) approved geriatric medicine as an area of special competence. Effective January 1988, the American Board of Internal Medicine and the American Board of Family Practice specified procedures for the certification of added qualifications in geriatric medicine. VA played a critical role in the development and recognition of geriatric medicine in the United States, and as of FY 1989-90, any VA medical center may conduct fellowship training in geriatrics, providing an ACGME accredited program is in place.

The demand for physicians with special training in geriatrics and gerontology continues unabated because of the rapidly advancing numbers of elderly veterans and aging Americans. The VA health care system offers clinical, rehabilitation, and follow-up patient care services, as well as education, research, and interdisciplinary programs that constitute the support elements that are required for the training of physicians in geriatrics. Since 1978-79 this special training has been accomplished through the VA Fellowship Program in Geriatrics conducted at VA medical centers affiliated with medical schools. The 12 initial training sites increased to 20 in 1986 and to 34 in 1990.

These fellowships are designed to develop a cadre of physicians who are committed to clinical excellence and to becoming leader of local and national geriatric medical programs. Their dedication to innovative and thorough geriatric patient care is expected to produce role models for medical students and for residents. The 2-year fellowship curriculum incorporates clinical, pharmacological, psychosocial, education, and research components that are related to the full continuum of treatment and health care of the elderly.

During its 12-year history, the program has attracted physicians with high quality academic and professional backgrounds in internal medicine, psychiatry, neurology, and family practice. Their genuine interest in the well-being of elderly veterans is apparent from high VA retention rate after completing the fellowship training. Many of the Fellows have published articles on geriatric topics in nationally recognized professional journals, and several Fellows have authored or edited books on geriatric medicine and medical ethics. The number of recipients of important awards and research grants (AGS/Pfizer, AGS/Merck, Kaiser, NIA and VA) increases each year.

As of June 1990, 234 Fellows had completed the program in 11 successive groups: 1980-8; 1981-12; 1982-16; 1983-19; 1984-23; 1985-22; 1986-27; 1987-23; 1988-28; 1989-27; and 1990-28. About 45 percent remain in the VA system as full or part-time employees. Close to 50 percent of all graduates hold academic appointments. The VA group of 234 fellowship alumni/ae represents the largest single agency contribution to the pool of trained geriatricians in the United States.

Geriatric Dentistry

In July 1982, 2-year Dentist Geriatric Fellowship Programs commenced at five medical centers that are affiliated with schools of dentistry. The goals of this program are similar to those described for the Physician Fellowship Program in Geriatrics. As of June 1990, 35 dentist fellows had completed their special training. In 1988, the number of training sites increased to six for a final 3-year cycle. Nearly 90 percent of the program alumni/ae have accepted offers of post fellowship employment in the VA system.

The format of these fellowships, however, is changing from predesignated sites to individual awards. Candidates from any VA medical center with the appropriate resources may compete for postdoctoral fellowships for dental research.

Geriatric Psychiatry

In 1990, a competitive review selected eight VA medical centers to become training sites for fellowships in geriatric psychiatry. Recruitment is in progress for physician fellows to begin in July 1991. The American Board of Psychiatry is currently developing criteria for ACGME accredited training in geriatric psychiatry. Until this accreditation process becomes official, VA expects to provide funding for fellow level training at selected sites. This is another example of VA's initiative in establishing programs in areas of need. Upon activation of the ACGME process, VA fellowship programs will be in a position to serve as models for others.

Interdisciplinary Team Training Program

The Interdisciplinary Team Training Program (ITTP) is a nationwide systematic educational program that is designed to include didactic and clinical instruction for VA faculty practitioners and affiliated students from three or more health professions such as physicians, nurses, psychologists, social workers, pharmacists and occupational and physical therapists. The ITTP provides a structured approach to the delivery of health services by emphasizing the knowledge and skills needed to work in an interactive group. In addition, the program promotes an understanding of the roles and functions of other members of the team and how their collaborative contributions influence both the delivery and outcome of patient care.

The ITTP has been activated at 12 VA medical centers. Two sites located at VA Medical Centers (VAMCs) Portland, OR, and Sepulveda, CA, were designated in 1979. Three additional VA sites at Little Rock, AR; Palo Alto, CA; and Salt Lake City, UT, were selected in 1980; and VAMCs Buffalo, NY; Madison, WI; Coatesville, PA; and Birmingham, AL, were approved in 1982. In the spring of 1983, three sites were selected at VAMCs Tucson, AZ; Memphis, TN; and Tampa, FL.

The purpose of the ITTP are to develop a cadre of health practitioners with the knowledge and competencies that are required to provide interdisciplinary team care to meet the wide spectrum of health care and service needs for veterans to provide leadership in interdisciplinary team delivery and training to other VA medical centers; and to provide role models for affiliated students in medical and associated health disciplines. Training includes the teaching of staff and students in the select VA priority areas of health care needs, e.g., geriatrics, ambulatory care, management, nutrition, etc.; instruction in team teaching and group process skills for clinical core staff; and clinical experiences in team care for affiliated education students with the core team serving as role models. During fiscal year 1990, 183 students from a variety of health care disciplines were provided funding support at the 12 model ITTP sites.

Clinical Nurse Specialist

Clinical nurse training is another facet of VA education programming in geriatrics. The need for specially trained graduate level clinical nurse specialists is evidenced by the sophisticated level of care needed by the VA patient population, specifically in the area of geriatrics. Advanced nurse training is a high priority within the VA because of the shortage of such nursing specialists who are capable of assuming positions in specialized care and leadership.

The Clinical Nurse Specialist Program was established in 1981 to attract clinical specialist students to VA and to help meet requirement needs in the VA priority areas of geriatrics, rehabilitation, and psychiatric/mental health, all of which impact on the care of the elderly veteran. During fiscal year 1988-89 the critical care pathway was added to the program. Direct funding support is provided to master's level nurse specialist students for their clinical practicum at the VA medical centers that are affiliated with the academic institutions in which they are enrolled. In fiscal year 1990, 129 master's level clinical nurse specialist student positions were supported at 46 VA medical centers; 28 in geriatrics, 1 in rehabilitation; 34 in psychiatric mental/health; 31 in critical care; and 35 in adult health/med-surgery.

VA Gerontological Nurse Fellowship Program

Gerontological nursing has been a nursing specialty since the mid-1960's. As society changes, particularly in terms of the demographic trend in aging, more attention is being focused on both the area of gerontological nursing and the education of nurses in this specialty. Doctoral level nurse gerontologists are prepared for advanced clinical practice, teaching, research, administration, and policy formulation in adult development and aging.

Effective fiscal year 1989-90, a 2-year nurse fellowship program became operational for registered nurses who are doctoral candidates enrolled in doctoral level programs, and whose doctoral dissertations have clinical research foci in geriatrics/gerontology. It is planned to select and fund two nurse fellows each fiscal year at approved VA medical center sites. Initial appointments will be for 1 year. Reappointments of 1 additional year are subject to satisfactory first year's performance evaluations. It is anticipated that a least half of the participants who complete this VA fellowship will be recruited into VA. For fiscal year 1990, two fellows were provided funding support; one fellow was appointed at VAMC Ann Arbor, MI, and the second appointed at VAMC Lexington, KY.

Expansion for Associated Health in Geriatrics

A special priority for geriatric education and training is recognized in the allocation of associated health training positions and funding support to VA medical centers hosting GRECCs, and to VA Medical Centers (non-ITTG/GRECC sites) that offer specific educational and clinical programs for the care of older veterans. In fiscal year 1990, a total of 142 associated health students received funding support at 62 VA facilities in the following disciplines: Social Work; Psychology; Audiology/Speech Pathology; Clinical Pharmacy; Clinical Nurse Specialist; and Occupational Therapy.

Continuing Education

In support of the VA's mission to provide health care to the aging veteran population, education and training continues to be offered to enhance VA medical center staff skills in the area of geriatrics. These educational activities are designed to respond to the need of VA health care personnel throughout the entire Veterans Health Services and Research Administration. Annually, Postgraduate and In-Service Training (PIT) funds are distributed to two levels of the organization for support of continuing education activities in priority areas.

First—Program 870 (Core PIT) funds are provided to each of the VA medical centers to meet the continuing education needs of its employees. VA Central Office also allocates funds for VAMC-initiated program to allow health care facilities, with assistance from a Regional Medical Education Center (RMEC), to conduct education programs with in the hospital to meet locally identified training needs. VAMC-initiated funds were used to support 21 separate activities specifically having geriatrics as the primary content.

Second—Continuing Education Field Units (CEFUs), which include seven Regional Medical Education Centers (RMECs), eight Cooperative Health Education Programs (CHEPs), two Dental Education Centers (DECs), and two Continuing Education Centers (CECs) meet education needs by conducting programs at the regional and local medical center level. Examples of recent programs are:

Clinical Issues in Caring for the Elderly, Developing Sensitivity to the Older Patient, Geriatric Dentistry, Issues in Geriatric Medicine, Rehabilitation Medicine and the Geriatric Patient, Alzheimers Disease, Behavior Problems of the Elderly, Geriatric Ambulatory Care, Geriatric Pharmacology, and Elder Abuse: Past, Present, and Future.

RMEC programs are also conducted in cooperation with the GRECCs, which received \$182,000 in PIT funds to support their identified needs. This collaborative effort ensures the efficient use of existing resources to meet the increasing demands for training in geriatrics/gerontology. For example, the GRECCs have met some of the training needs identified by RMECs and RMECs have utilized GRECC staff as faculty for their programs.

In fiscal year 1988, the issue of "Health Care Problems of the Elderly" was identified as a systemwide training need in the VA. In response to this need, a National Training Program was developed and implemented in fiscal year 1989. "Health Care Problems of the Elderly" is a multiyear program providing training throughout the VA system. Another multiyear National Training Program, "Alternatives to Acute Institutional Care", was initiated in Region III for VAMC health care teams. This program was provided to VAMCs in Region VII during 1990 and will be provided to health care teams in an additional region in fiscal year 1991. Another National Training Program, "Ambulatory Care of the Elderly" was begun in fiscal year 1990 and will expand in fiscal year 1991.

In addition, CORE PIT funds are provided to support continuing education experiences for the Geriatric Fellow and the Interdisciplinary Team Training Program staff members.

Health Professional Scholarship Program

The Scholarship Program was established in 1980 and funded from 1982 through 1985 to assist in providing an adequate supply of nurses for the VA and the Nation. In 1988 the Scholarship Program was reactivated to provide scholarships to students in full-time nursing and physical therapy baccalaureate and master degree programs in certain specialties specified by VA. Since the beginning of the program, 44 awards have been given to students studying for advanced master's degrees in gerontological nursing. Of this number, 20 students have completed degrees and fulfilled their 2-year service obligations by working as professionals in VA medical centers. Fifteen of these professional nurses are still employed by VA. The remaining students are in the process of completing their degrees, and will be beginning their service obligations in the near future.

Learning Resources

The widespread education and training activities in geriatrics have generated a broad spectrum of requirements for learning resources throughout the VA system. Local library services performed hundreds of on-line searches on data bases such as AGELINE (available through Bibliographic Retrieval Services), and continue to add books, journals, and audiovisuals (AV's) on topics related to geriatrics and aging. Multiple copies of several AV programs were made available nationwide for VA staff use through the VA Network Audiovisual Delivery System. In 1990, these titles included "Geriatric Assessment for Clinical Decision-making," "And the Home of the Brave," "Coping with Caregiving," "Health and Illness Issues in Old Age," and "Community Services and Legal Issues." In addition, the VA produced several audiovisuals including "Alzheimer's Disease: Managing the Later Stages in the Home," "Alzheimer's Disease: Managing the Later Stages in the Health Care Setting," "Alzheimer's Disease: The Family Conference." The VACO Library continues to expand its collection of books, AVs, and journals concerning aging and geriatrics.

VII. VETERANS BENEFITS ADMINISTRATION

COMPENSATION AND PENSION PROGRAMS

Disability and survivor benefits such as pension, compensation, and dependency and indemnity compensation administered by the Veterans Benefits Administration provide all, or part, of the income for 1,860,557 persons age 65 or older. This total includes 1,317,381 veterans, 511,123 surviving spouses, 27,782 mothers, and 4,270 fathers.

The Veterans' and Survivors' Pension Improvement Act of 1978, effective January 1, 1979, provided for a restructured program. Under this program, eligible veterans receive a level of support meeting a national standard of need. Pensioners generally receive benefits equal to the difference between their annual income from other sources and the appropriate income standard. Yearly cost of living adjustments (COLAs) have kept the program current with economic needs.

This Act provides for a higher income standard for veterans of World War I or the Mexican border period. This provision was in acknowledgement of the special

needs of our oldest veterans. The current amount added to the basic pension rate is \$1,613 as of December 1, 1990. Pensioners receiving benefits under the prior program were provided the opportunity to elect to receive benefits under the new program.

VETERANS ASSISTANCE SERVICE

Veterans Services Division personnel maintain liaison with nursing home, senior citizen homes, and senior citizen centers in regional office areas. Locations are visited as the need arises. Appropriate pamphlets and application forms are provided to personnel at these homes during visits and through frequent use of regular mailings. State and Area Agencies on Aging have been identified and are provided information on Department of Veterans Affairs (VA) benefits and services through workshops and training sessions. Seminars are conducted for nursing home operators and other service providers that assist and serve this patient population. Regional office coordinators continue to serve on local and State task forces that deal extensively with the problems of the elderly.

The Veterans Assistance Services exhibit, "Veterans Benefits for Older Americans," highlights, by pictures and accompanying text, the various benefits explained in the pamphlet of the same title (VA Pamphlet 27-80-2). The exhibit, designed to convey VA's concern with the aging veteran populations, has been displayed extensively at meetings addressing problems of aging. The pamphlet has been given wide distribution by information and referral representatives at field stations.

The elderly as a group encounter problems with transportation due to rising costs, limited income, and most importantly, physical ailments. Thus, Veterans Assistance Service continues to emphasize the use of the toll-free telephone service as a means of contacting their offices for information and assistance.

A special listing of aged beneficiaries has been furnished to regional office Veterans Services Divisions for individualized outreach use. Veterans and/or dependents are being contacted and provided with information and claims assistance on any additional VA benefits that may be applicable to them. One of the reasons for this outreach program is our concern that large numbers of our older population are "at risk" and, as such, they may be unaware of the higher income limitations available under the pension program, i.e., housebound status and aid and attendance. Moreover, we are convinced that many are unaware of the impact of unreimbursed medical expenses on pension eligibility.

An outreach program of service to homeless veterans, to include those who are elderly and ill, has been initiated by Veterans Benefits Administration in cooperation with Veterans Health Services and Research Administration, Social Work Service, and Vet Center Team Leaders.

Veterans Assistance Service has made contacts with editorial staff of "Modern Maturity", the bi-monthly publication of the American Association of Retired Persons (AARP). These contacts are to encourage the publication of articles to inform older veterans of the benefits that may be available to them from VA. The June-July, 1990 edition of Modern Maturity included an article explaining VA benefits for widows whose remarriage following death of the veteran had terminated. The article resulted in many inquiries being made to regional office Veterans Benefits Counselors. Another publication, "New Choices, For the Best Years" has also been contacted for publication of newsworthy veterans benefits articles of interest to the older veterans.

